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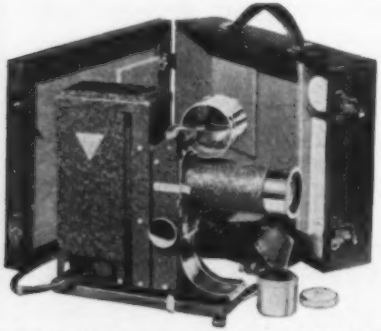

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EDUCATION

Vol. 58 APRIL, 1938 No. 8

WILL THE FILM AND SCHOOL JOIN HANDS?

F. Dean McClusky
SCARBOROUGH SCHOOL

How can the motion picture be harnessed to the needs of the school? The history of educational motion pictures shows a lack of coöperation between educators and technicians. The formula is educator brains plus technicians implemented by capital.

AT all times there has been a lack of coördination between the best educator minds of the nation and those who have essayed to produce films for school use. In the early nineteen twenties the stupidity which characterized too many of the entertainment films produced in Hollywood caused criticism among the better classes of American people—those with whom the control of American schools rested. Social workers and educators were highly critical of the moral tone of the run of entertainment pictures. This resulted in a reaction against the movies which found expression in The Motion Picture Research Council and the Legion of Decency.

Much of the antagonism among the educated classes in America toward Hollywood productions was transferred to all motion pictures. And the early producers of educational films found it difficult to change this current of thought in American intellectual life when they came face to face with it in trying to sell films to school authorities throughout the nation.

Furthermore, the theatrical producers and distributors fearing that the "educational" market might develop in competition with theatres, issued an edict through Will Hays that the schools should confine their motion picture efforts to informational films only. One wonders what would have happened during those hectic days after the World War had one or two Hollywood producers released high-grade entertainment pictures expressly made for school, church, and community-center exhibitors. It does not take a stretch of the imagination to see that an enormous competitive market might have been created which would have had a real effect upon theatrical productions in general.

But none of the major producers had the vision or courage to do it. Rather they chose to block the competition of schools in the entertainment field. Those productions suitable for school use which might have been placed in circulation were bottled up in their vaults. Time will tell whether this log jam is permanent or whether a little dynamite judiciously placed will release it.

The industry, however, could not afford to let the non-theatrical field become openly antagonistic. It needed to cultivate the good will of the educators, so some of the theatrical producers organized "educational depart-

ments." Each time this was done the move was accompanied by ballyhoo. The most notable example was that of the Fox Film Corporation when it was under the Presidency of Harley Clark, the organizer and founder of the Society for Visual Education. Fox inaugurated its educational campaign by bringing to Washington a number of school children picked from various states to participate in a comparative test of the effectiveness of the sound film. As in the past, a number of teachers lent their names to the enterprise intrigued this time by a free trip to Washington. But it failed to impress school authorities and with Harley Clark's passing from power the Fox Educational Department waned.

From the beginning of the visual education movement the number of sincere workers has been growing year by year steadily but surely. Among pioneering school teachers and officials there has been faith in the educational potentialities of the motion picture. These adventurers struggled along with the materials at hand and made the best that they could of them. Business men who engaged in the manufacture of projection equipment met with greater success than the producers of films. But they had problems to solve. At first a shift had to be made from the standard theatrical type of projection equipment to portable 35 mm. "suitcase" projectors which in many localities were permitted to be used in classrooms even without a fireproof booth. But the fire hazard was there nevertheless, and it was not until Eastman succeeded in standardizing narrow-width safety film on the 16 mm. size that a distinct change in projection equipment for schools occurred. Only safety film was manufactured for use in the 16 mm. projectors. These smaller projectors and the film itself were much less expensive.

Many of the smaller companies that had been making a few dollars here and there on rentals and the sale of equipment were caught by the change for they had considerable capital tied up in 35 mm. prints. Companies that could afford it began to print on 16 mm. width film and weathered the storm but not for long. Sound came creating new problems which were complicated by the depression. Furthermore, in schools visual education budgets were cut to the bone and in some instances eliminated altogether because visual instruction was regarded as a side issue. None of the companies that had set out to make school films stuck consistently to a policy of manufacturing visual materials correlated with established courses of study and this made it difficult to defend expenditures for motion pictures in schools.

Another complication arose from the fact that many schools bought projectors without having investigated thoroughly the films that were available for school use. A few good films had been judiciously used by coached salesmen to intrigue boards of education and school officials into the purchase of projectors who found after the meager supply of good material had been exhausted, that they were adrift without a compass to guide them. Many turned to advertising or propaganda films.

These free films had been produced in large quantities by industrial concerns and others who were quick to recognize the potentialities of moving pictures for sales and advertising campaigns. School film libraries soon were

filled with free films to which were added those produced by government bureaus and other agencies. In fact, the government deposited in city school systems, universities, and museums several thousand reels of film that had been discarded after the World War. All of this did not help the sincere producer of educational pictures, of which there were a large number in the small fry class, because he found himself not only in competition with others like himself but also competing with a low rental market created by free film.

To add to the general confusion, at the time these early production efforts began to manifest themselves, American education was preoccupied with a number of new intriguing interests such as educational tests and measurements, junior high schools, the Gary plan, project teaching, the Platoon system, *et cetera*. Educational leaders were so busy testing, surveying, and diagnosing these other "movements" that they had little time to spend upon the motion picture. Furthermore, the secondary school population was growing by leaps and bounds and superintendents and board members were occupied with new building programs.

In all this razzle dazzle the motion picture was neglected as a part of the main program. It was looked upon as a side issue. No guiding principles were formulated and no policies developed. A few bureaus of visual instruction were established in city school systems and in universities, but those in charge of these enterprises became largely clerks or curators after the fashion of museums and they were seldom consulted with respect to major changes in curricula, educational policies, teacher training, or school buildings. Directors of visual instruction had to be content to collect and catalogue materials with the hope that teachers would find some value in what they had to offer. It was not until Hoban succeeded in making a teacher-training course in visual instruction compulsory in the normal schools of Pennsylvania that any considerable attention was paid by those in authority to the necessity of training teachers in the use of these new materials. Efforts to gain recognition for visual instruction on the programs of national educational societies resulted in disappointment. The only time the motion picture received attention was when social workers and educators blamed many of the evils to be observed in American life upon the movies.

The academic mind in the universities steeped in the traditions of metaphysics, philosophy, and expertism in the use of symbolic imagery frowned upon the use of motion picture for teaching as they frowned upon all efforts to introduce studies of practical and concrete situations into college curricula. Today a fight is being waged against the large number of practical courses in engineering, agriculture, commerce, *et cetera*, in universities and colleges. Hence, the pioneers who worked in visual instruction both within the educational system and from without found themselves hemmed in by obstacles over which they could not climb, and through which they could not penetrate.

The only ones who succeeded financially to any extent were the lecturers like Burton Holmes and Lyman Howe. These gentlemen were respectable in educational circles and were widely accepted in lyceum circuits, Chautauquas, and on university and school lec-

ture platforms. And they were able to operate without interference from the motion picture theatrical moguls.

Despite the predictions of some of the intelligentia that the moving picture was a novelty which would soon seek its own level, the industry which it created continued to grow more powerful in influence. Bigger and better playhouses were built. They became palaces of entertainment surpassing the fondest dreams of theatre owners on Broadway. Movie houses enriched their programs by stage shows and fine orchestras which were symphonic in quality at prices within the reach of the masses. Camera technique and acting improved.

The radio gave an impetus to mechanized entertainment which added much to the concern of educators who came to look upon these two great industries as usurpers striving for the interests of children and serving to distract them from more serious contemplations. Then sound was added to the motion picture and the Payne Fund Studies demonstrated with startling vividness the strong influence of the cinema upon the attitudes and behavior of children. The worst fears of the educators became founded upon fact.

But constructive thinkers pointed out that the power of the motion picture could be used to develop attitudes and behavior in keeping with educational objectives as effectively as it could be used to destroy them. It became apparent that the motion picture could not be ignored any longer and now educators, in the high places of importance and influence, are belatedly determined to harness this great force in modern life to the needs of the school.

How can this be done? The formula is educator brains, plus technicians, implemented by capital.

The business of making motion pictures for education calls definitely for the creation of a national committee of the best educational brains obtainable to develop definite policies with respect to the place of motion pictures in education and then to proceed to blue print one course of study at a time in terms of research findings as to the particular topics which in the light of the course objectives should be taught by motion pictures.

The Payne Fund Studies have made it apparent that the motion picture could be of great value in teaching attitudes, understandings, and in developing types of behavior which are now not stressed in our present courses of study. Such matters as health and safety, human relations, current events, social and international problems, and wholesome entertainment can perhaps be best taken care of in the curriculum at relative low cost through the medium of the motion picture.

The mechanical problems of projection and photography have been successfully ironed out. Since Pathescope, Eastman, Bell and Howell, DeVry, Victor, and others began the manufacture of cameras and projectors for the amateur movie photographer, a host of individuals has been trained in the essentials of motion picture photography and projection. Today there are many first-rate professional and amateur camera men available for the production of films for school use. In other words, educators are not dependent upon Hollywood for expert technical assistance; in fact, many school men themselves have attained a high degree of skill in pro-

ducing motion pictures of quality. A young graduate student at Teachers College has produced six films which are of sufficient merit to enable him to sell and rent prints to schools in sufficient quantity to pay all the expenses of his activities to date. The writer saw exhibited at Sarah Lawrence College two years ago a film on the Embryo Chick made by a professor of one of the middle-western universities which is an extraordinarily fine medium for teaching this particular topic in Biology. But these amateur photographers are working absolutely alone in an uncharted area. They need a pivot about which to revolve. This should be an unbiased advisory group that can talk their own language, and see to it that their productions are made available through cooperating distributing agencies to teachers in the schools of the nation.

Mechanical improvements in projection and photography will be made as time goes on, but such improvements as come in the future are more likely to be minor perfections rather than major basic changes. Perhaps someone will invent a process by which a cheap substance such as paper may be used instead of the acetate cellulose film to lower the cost of raw film stock and to improve its durability. Experiments in the use of cellophane both in Germany and America have been recently reported to the writer as indicative of progress in this direction. Such material, however, would require no changes in the mechanics of projection.

Finally, in order to secure the kind of educational leadership, which the production of motion pictures needs, it is essential that the educational advisors retain their professional status. The framework in which they would perform would have to be a non-profit foundation type of set-up, the outlook of which would be national in scope and would be free from any special interests or desires to propagandize. It would have to be a strictly non-partisan, independent group. In order that this may be accomplished the capital to set such an institution in motion would of necessity have to come from sources that would command and hold the respect of the educational public. It would have to be furnished outright with no strings attached to it.

In outline these are the most important steps to be taken to harness the motion picture for school purposes.

If it is left to the efforts of scattered individuals throughout the country, progress will not only be slow but the universal use of this medium in schools may be delayed for scores of years. Unless efforts are unified, visual instruction through motion pictures will only come about by a gradual infiltration and, as the past history of the motion picture in education shows, the infiltration will be motivated by special interests which will not have the best interests of education as their main purpose. The power of the motion picture to develop behavior and attitudes in keeping with educational purposes would, if it were properly used, not only step up the intelligence of our citizenry both with respect to moral, social, economic, and political issues in this country but also with respect to world problems.

Who will capitalize this great opportunity? The need is universally recognized. The educational leadership is available. The time to act is at hand.

THE LITERATURE IN VISUAL EDUCATION: ITS STRENGTHS AND WEAKNESSES

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There has been a need for the evaluation of the literature in the field of visual education. Dr. Dunn and Miss Schneider view its abundance not with alarm but make a strong plea for the critical analysis of the values of visual instruction emanating from the pens of our educational leaders and teachers of teachers.

EXTENSIVENESS, pervasiveness, abundance — this is perhaps the most outstanding characteristic of the literature of motion pictures in education. The field is treated copiously in periodical literature of all kinds, whether newspapers, journals of current events, drama, psychology, science or education, magazines of home, farm, or smart set. It appears frequently in proceedings of conferences on almost every aspect of modern life and education. Yearbooks increasingly devote space to the field. Such professional journals as *Education, Journal of Educational Sociology,* and *Progressive Education* give whole issues to consideration of this topic. It is the subject of books issued by many publishers. Forty-five books are already available on visual education and educational films, and at least forty-four on educational implications of the theatrical film. Textbooks and courses of study increasingly include information on sources of visual material and bibliographic references on its use. Teachers' handbooks are numerous. *Educational Screen,* a monthly devoted exclusively to visual education, has been published for sixteen years. Finally, the extensiveness and periodical quality of the publications in this field has seemed to the American Council on Education to warrant its compilation in a source book.[1]

The range of authorship parallels the number of titles. The motion picture as an educational medium is treated by both theatrical and educational motion picture producers, representatives of equipment houses, social psychologists, specialists in public relations, and professional educators of every capacity — superintendents, principals, directors of visual education, general supervisors, curriculum workers, classroom teachers, graduate students, and faculties of teachers colleges, liberal arts colleges, and universities.

Reports of researches in the field represent a wide geographical distribution. Universities and colleges in Alabama, North Carolina, Oklahoma, Tennessee, Texas, Virginia, West Virginia, Washington, D. C.; Connecticut, Massachusetts, New York State, Pennsylvania, Illinois, Indiana, Ohio, Michigan, Wisconsin, Iowa, Kansas, Nebraska, Colorado, California, and Washington State have reported masters' theses and doctoral dissertations

1 "Motion Pictures in Education: A Summary of the Literature." Compiled by Edgar Dale, Fannie W. Dunn, Charles F. Hoban, Jr., and Etta Schneider for the American Council on Education, H. W. Wilson Co., 1937.

in this area. Dr. Charles F. Hoban, Jr., reported 57 studies in his evaluation of research done between 1915 and 1934. The "Bibliography of Research Studies in Education" issued by the United States Office of Education adds 46 studies for the years 1934 to 1936. This is an indication of the increase of attention given to this area by research workers. The topics considered in these research studies are almost as diversified as the areas of learning themselves.

In view of the remarkable extent of published material dealing with the motion picture, which has been in existence less than three decades, unevenness of value, superficiality, duplication, and uncriticalness inevitably characterize much of it. There is hardly a field in the total range of titles which has been adequately explored, or is not in need of sounder or more critical treatment. Theoretical programs not subjected to the crucible of practical application, general descriptions wanting in tangible detail, detailed descriptions without evaluation or vaguely subjective, or wishful evaluation without reference to definite criteria—these are notable characteristics of far too much of the literature. Such weaknesses as these characterize the whole range of writings in the field, with differing particulars according to the area under treatment, or the educational position of the author.

In the field of *administration,* articles and authors tend to be general, theoretical and wanting in evaluation. Plans and programs for cities, states, or even the nation have been extensively set forth. Only part of these report the actual administration of such programs. Even in these, critical treatment is meagre. Such questions as the following are neither asked nor answered: What are the teachers thinking of the program? Are they enthusiastic, or is the system being imposed? Is there universal cooperation on the part of the teaching staff? What practices have had to be modified to meet new educational trends? Is there any provision for teacher growth? Is such provision adequate? In short, do present programs represent democratic practice? What recommendation should be made to other school administrators? What problems of finance have yet to be met?

Notable exceptions to this criticism are the reports of the New York State Association of Elementary Principals, and the principal of the training school of the University of Denver.[2, 3] The experiences of their teachers have been cited in support of the recommendations which are made for visual aids in the case of the former, and the silent motion picture in the case of the latter.

Classroom teachers more frequently write of educational value resulting from actual use of films, but when their reports are analyzed they commonly reveal merely subjective judgment and narrow or unsound concepts of values. In an era of changing socio-economic and psychological goals

2 "Visual Aids in the Schools: A Report of Present Uses and Suggestions for Improvement." Committee on Educational Progress, Visual Aids Division, New York State Association of Elementary Principals. Bulletin IV, December, 1935. (Cited in "Motion Pictures in Education," pages 137-9.)

3 "The Silent Film as a Teaching Aid," by Gilbert S. Willey, Akin and Bagshaw, Inc., Denver, Colorado, 1935. (Cited in same, pages 139-43.)

for education, outcomes are still predominantly expressed in terms of comparison with textbook or other types of instruction, as means for imparting specific items of information; in an era charcterized by propaganda, there is little question of the authenticity of the motion picture's presentation.

Here and there, encouragingly, a classroom teacher evidences awareness of wider potential outcomes of motion pictures in education. A teacher in a British private school states,[4]

"Examinations and the allotting of marks seem the only way we have devised for testing the results of teaching. . . . However, the teaching of facts, important though it may be for the purposes of examination, plays a small part in real education. It is unfair to claim a certain value for the cinema and to justify it by testing a completely different value."

A teacher of "abnormal" children in France writes,[5]

"A teacher of 'improvement' classes is fortunate in having no other object than education. He has not to bother about examinations and their results."

A teacher in an American high school, realizing the value of films for promoting intelligent thinking, has made an excellent distinction between the effectiveness of memory and thought questions in social studies, and uses such tests as the following on a motion picture of the life of the Puritans:[6] "If you lived in New England in 1630 and wanted some fuel to keep you warm, what would you do?", the student selecting his answer from one of the following: phone for a ton of coal, light the gas, chop some wood, use an electric stove, or light the oil stove.

The same writer states the following criteria among others, for selecting thought questions:

"The question should be worth thinking about; definite application to the pupil's own problems or to community problems should be made whenever possible; the original selection of material for study is important, because it is easier to find thought questions in live material than to strain at promoting useful thought about useless data; the question 'so what?' might be asked of the material itself; visual education material is more than just another way of stuffing a pupil with information: it is more than a supplement to other sources of subject content; it can be a stimulus to thought."

Motion pictures, skillfully applied to desirable educational objectives can go even further than this statement indicates. Occasionally, a teacher has suggested that some films have actually led to desirable activity on the part of pupils or to intensive interest in a new area of experience, but no one has yet made this the theme or salient point of an article. Some of the 'socializing experiences' mentioned by one high school teacher of American History as outcomes achieved were:[7]

"Pictures on the World War and peace were focal points for a discussion of the individual's duty in aiding in the preservation of peace. The TVA film, the one on soil erosion campaigns, and the one treating the fight against disease served to widen pupils' knowledge of the social responsibilities of American citi-

4 "The Educational Use of the Cinematograph," by Ronald Gow, "Educational Screen," 6:71-3, February, 1927. (Cited in same, page 124.)
5 "Utilizing the Cinema for Teaching Abnormal Children," by M. Prudhommeau, "International Review of Educational Cinematography, 6:747-61, November, 1934. (Cited pages 178-9.)
6 "Test Questions of the 'Thought' Type in Visual Education," by H. K. Moore, "Educational Screen," 16:113-14, April, 1937. (Cited pages 130-1.)
7 "The Use of the Motion Picture as a Technique of Instruction," by Grace Hotchkiss, "Social Studies," 28:6-13, January, 1937. (Cited, pages 191-6.)

zens. Contact with the occupational world was built up. . . . The evolution of the oil industry, the activities of the Department of Agriculture, and the stock market developed an understanding of . . . the social and economic significance of various aspects of the occupational world."

The same teacher illustrates provision for individual differences as follows:

"Superior students prepared lectures to be given to explain the silent film, or served as chairmen of committees making group reports. New avenues of interest opened up by the movies were investigated by the abler students who volunteered additional reports. One girl followed up a picture on women in industry by correspondence with the Women's Bureau, which resulted in an illustrated report on 'The Present Status of Women in Industry.' A boy made a tour of CCC camps in the immediate vicinity to supplement the film on CCC camps. Two pupils, interested in the personnel of the TVA carried on a correspondence with the president of Antioch College, who is also in charge of the TVA, with the consequence that these pupils entered Antioch College after graduating from the high school."

In spite, however, of such examples of educational insight, teachers' articles on the use of films in the classroom reveal little recognition of the innumerable possibilities of films for personality adjustments, as means of discovering child interest, as leads to artistic creativeness, or desirable social interest or conduct, as an aid in teaching backward children, or as means for developing critical taste with regard to the motion picture as an art product. A few reports exist of the use made of films with children of poor reading ability, but the values derived from such use have not been fully perceived.

There is much yet to be desired in the literature on education through the motion picture emanating from *leaders and teachers of teachers,* whether curriculum workers, supervisors, or those engaged in the professional preparation of teachers. Curriculum materials are only beginning to include source lists of pertinent visual materials, and such references as are given are deficient in evaluation of the materials in terms of educational objectives avowed in the curriculum. Without leadership in evaluation of the motion picture as means of education, purposeful and critical use of such materials cannot be expected from classroom teachers in general. *Handbooks for teachers* for use with theatrical and "educational" films are increasingly available, but such handbooks are very uneven with respect to the philosophy or techniques they present. A critical study is needed of existing teachers' handbooks, to the end of constructive suggestions for their improvement. Such improvement is most needed in guides to accompany teaching films; under the sponsorship of the Department of Secondary Education of the N. E. A. guides for use with theatrical films are being notably improved.

There is little evidence of effort on the part of general supervisors even to encourage teachers to consider the motion picture as an educational medium, much less to consider it critically or to make evaluated reports of its use. Such questions as the following yet remain unconsidered, or unanswered by these leaders of teachers: What contribution does the motion picture make to pupils in the activity program? What has been the expe-

rience of rural teachers in this area? What are the problems involved in using the motion picture? What does classroom experience reveal? What types of guidance is still needed for the busy teacher? What use is the teacher making of children's experience with theatrical films?

Persons engaged in the training of teachers are increasingly becoming aware of the need for some preparation with respect to visual aids. But their reports, similarly, tend to remain theoretical, rather than practical. They concern themselves with such controversies as: Should a course be separate or part of other courses? Is such training needed at all? Who should give this instruction, and how? There are many courses already in existence, yet little has been written regarding the practical problems encountered in offering them. To what extent are courses of study for visual education being modified in practice? One instructor reported, though not in print, that an elaborate program of instruction which he had developed for a course, had not been followed at all, a different approach and treatment having proved necessary when the personnel of the class was considered. Other instructors would benefit greatly from a report of such an experience, especially if the reasons for the modification and the final outcomes were outlined. More needs to be written on the extent to which courses for teachers in service are meeting existing needs.

There is little evidence that the use of films in the school today is not the result of "administration-centered", or "teacher-centered" schools. *Pupils* are given very little opportunity (in print) to state their case, either for or against this educational aid. Do they like motion pictures at all? Do they like the kind of films that are available to them? Are they critical of the organization of the films, or do they sit back and watch the reels go by? Would they much prefer other forms of experience? What statements have they ever made for or against sound or silent films?

Modern youth have pronounced opinions with respect to athletic favorites, movie stars, or radio performers. They will probably reveal corresponding opinion or even critical judgment on schoolroom materials. Here is evidence in comments made on commercial films used in the teaching of chemistry in one school.[8] "Real chemistry of process not emphasized." "Too many pictures of buildings and grounds." "Too much complicated machinery shown." In other words, the pictures were not organized to assist these pupils in learning chemistry —their main purpose for seeing the films. Few teachers express the same awareness of shortcomings in a film—or else much more would be written about the quality of materials available, and much less on the value of the 'motion picture' as ideally conceived.

A final critique is directed at *research workers.* Letters of inquiry and listings of research studies indicate that extended investigations are proceeding in many situations. There is no agency for making known the findings of research, thereby account-

8 "Industrial Motion Pictures in the Classroom," by Orville S. Walters, "Journal of Chemical Education," 6:1736-9, October, 1929. (Cited, pages 211-13.)

ing for overlapping in studies being carried on. Dr. Hoban, in reporting on researches made between 1915 and 1935 states that many of the independent studies, i.e., those not subsidized by large grants, show little recognition of the general problems revealed or investigated in previous studies. The path seems to be rather straight and unswerving. As Dr. Hoban states it, it is "This visual aid or none; this visual aid or that one? Not, how can desired changes be brought about in the child?"[9]

In spite of the long list of researches already reported, an examination indicates also that the field is still wide open for creative experimenters. The value of films in developing attitudes, in promoting social understandings as opposed to the accretion of facts, and the many values already cited in this paper have still to be studied under scientific experimental conditions.

Brief mention should here be made of the increasing activity on the part of *educators* to *produce* motion pictures to supplement those already available. Desirable techniques which conform to psychological and pedagogical principles need to be developed and reported upon, in order that this line of activity may be of educational value.[10]

The literature in visual education, then, may be summarized as having great quantity, with much still to be desired in quality. Much may be derived from printed reports if they would contain practical, clear, well thought through recommendations. Some of the features which should be included in such reports are:[11]

What are the objectives of the unit under consideration?

What is the place of the motion picture in relation to the objectives of this unit?

What grade level, mental level, or environmental circumstances in the lives of these children have caused limitations in their experiential background?

What are some of the conditions operating before and after the use of the motion picture?

What was the teacher's past experience in using the motion picture?

What other types of experience were provided in the unit, and what sequence did these follow?

Has the writer attempted to evaluate the motion pictures used in the unit in terms of the objectives to be achieved?

What provisions were made for individualizing instruction?

What were the reactions of the pupils?

What leads were furnished for further activities or interests?

What technique for using films was found to be most desirable?

What were some problems encountered in securing or using motion pictures?

What conclusions has the writer drawn from his use of the motion picture as a teaching aid?

What suggestions would he make to others?

Has the writer been specific in reporting titles, sources, cost, and the like?

9 "Experimental Research in Instructional Films," by Charles F. Hoban, Jr. (In "Motion Pictures in Education: A Summary of the Literature," page 358.)

10 "Making an Educational Movie," by Charles A. Gramet, "Educational Screen," 13:5, 40, January, February, 1934. (Cited, page 295-7.)

11 Quoted from "Motion Pictures in Education: A Summary of the Literature," pages 111-12.

SEEKING NEW EDUCATIONAL OBJECTIVES THROUGH THE USE OF FILMS

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Schools have failed somehow to humanize the intellectual experiences of children. It is Dr. Dale's belief that the judicious injection of motion picture serum into the blood stream of school life will enrich it and increase its vitality. But it is a new kind of motion picture serum to which he refers, of which there is little in existence.

I WANT to open the discussion on the topic "Seeking New Educational Objectives Through the Use of Films" with two quotations. The first is from James Harvey Robinson's *Mind in the Making*. He says:

"We have available knowledge and ingenuity and material resources to make a far fairer world than that in which we find ourselves, but various obstacles prevent our intelligently availing ourselves of them."

In the same book Robinson quotes H. G. Wells as saying:

"When the intellectual history of this time comes to be written, nothing, I think, will stand out more strikingly than the empty gulf in quality between the superb and richly fruitful scientific investigations that are going on, and the general thought of other educated sections of the community."

William F. Ogburn, of the University of Chicago, also points the gap that exists between our best knowledge and our ability to apply it. We are afflicted, he declares, with a cultural lag. As George Bernard Shaw once remarked: "Education is always driving the tacks where the carpet was two weeks ago."

Now cultural development would appear to stand in direct relation to educational advantages. We Americans have been known to boast of our educational system as the finest, the most democratic, certainly the costliest, in the world. Why, then, hasn't education handled the problem of cultural lag in the past twenty-five years? Why do we produce ideas so well and distribute them so badly?

First of all, there is the very practical reason that the unprecedented increase in enrollment during the last thirty-five years, especially in the secondary school, has put a major emphasis upon techniques of administration, finance, school publicity, and public relations. Comparable attention has not been given to curriculum needs or to educational practice.

Second, there still persists the educational theory that merely passing on the cultural heritage of the past would do the trick. This theory is vulnerable at two points. First, our cultural heritage has mounted to such vast proportions that the need for selection is imperative. How and what shall we choose for transmission? Unfortunately, much of what has heretofore been selected has suffered from the dead hand of tradition. The history taught in our schools, for example, has been largely European history. Obviously Asiatic history, especially that dealing with Russia, India, China, and Japan, would have just as much and perhaps greater relevancy at the present time. Second, the cultural-heritage theory carries with it an as-

sumption of a fairly steady, relatively unbroken, thread of history. But isn't it true that since the invention of power-driven machinery, the discovery of new sources of power, and new devices of communication, an emphasis upon the past as a guide for the future may turn out to be wholly irrelevant? There is a failure here to recognize what is happening *today* out in the world and to gear the work of the school into the fact of social change.

There is a further difficulty with the cultural-heritage theory. The theory is based, in part at least, upon a conception of education as a cold-storage device, a way of storing up information against the rainy day of possible use. I don't maintain that we can't prepare at all for the educational rainy day. The weakness of the preparation notion, however, is that it is raining today and every day. We need to use now all the education we have and we need education that is usable. We have been paying too much respect to an educational ritual inherited from the past, a ritual which is out of tune with current-day problems and conditions.

Closely related to the irrelevancy and ritualistic nature of much of our educational material is the further fact that education has been too verbalistic. We have placed great faith in intellectualistic symbols which, because they did not actually function in the lives of children and youth, were quickly forgotten once the practice period was over.

Yet another reason why our cultural development has not kept pace with the advance of science is that with our emphasis on discovering ways of solving problems as learned from our cultural heritage we have stressed passivity in learning and have not developed active thinking power about ways of solving current problems. We have developed the habit of looking to other people for the solutions of pressing problems and have failed to use our own resources, whether individually or coöperatively, in thinking through personal and social problems.

Again, we have depended upon a cold, analytical intellectualism. We have been dominated by the curious notion that human beings are primarily intellectual and governed by rational motives. We fail to recognize the fact that our warm, emotional inner selves so frequently control our colder, intellectual outer selves. We are often surprised when, in times of stress, the more unbridled aspects of emotionalism conquer our rational selves almost completely. We have failed somehow to intellectualize our emotions or to emotionalize our intellects. We have not developed the "warm-hearted intelligence" that Dewey speaks about.

This is a long, perhaps an unnecessarily long, introduction to the nub of my topic. My readers are probably asking what it all has to do with celluloid flashed before the eye at sixteen or twenty-four frames per second. Just this: We have depended upon the typical educational agencies—and this means primarily reading methods—for eliminating the cultural lag that Dr. Ogburn pointed out. Yet by this method we are faced with a major difficulty. Only a relatively small proportion of our population has had the advantage of college or high-school educations. Only 3 per cent of our population are college graduates and only 7 per cent are high-school gradu-

ates. In spite of this fact, as Dr. Buswell reported in a recent address, typical material in newspapers dealing with governmental, political and economic affairs requires a reading ability equivalent to that possessed by high-school graduates. This means that a large proportion of our cultural heritage, should we wish to pass it on in this fashion, has been denied to many of our population because of their inability to read intelligently. It is at this point that the motion picture makes its significant entry. We no longer have to depend on reading to convey information, attitudes, or suggestions for conduct. We can turn to the screen for assistance.

Through the motion picture, a modern medium of communication, it becomes possible to reconstruct significant past experience, to record faithfully present experience, to infuse into sterile and verbalistic experience the rich possibilities of emotional stirring and satisfaction, to develop a sensitivity to modern social and economic problems that is not possible with many other teaching devices. There exists in the film medium, which is usually less abstract than words, an emotional power, and aesthetic power, yes and a functional power, which we have failed to recognize. A book dealing with the scientific mechanics of soil erosion may leave us cold. A film like "The Plow That Broke the Plains" stirs us emotionally. A straightforward intellectual exposition of the history of medicine may leave us unmoved, but "The Story of Louis Pasteur" prompted one group of fourth-and fifth-grade children to say: "It was the most interesting thing we did in school this year." It caused a dull ninth-grade boy to make the very profound remark: "Civilization is slow, isn't it?"

Why should education be pedestrian, commonplace, unimaginative? We let the commercial radio and the commercial movie play cheap tunes on the emotional strings of children and youth. Haven't we any songs to sing in the classroom? We permit children to be excited about whether boy gets girl in the movies. Cannot we excite them also about whether democracy is to prevail in the United States? whether fascism is to win in Spain, in Europe, in this country? whether a few people get a lot and a lot of people get little? whether workers are massacred in cold blood by Chicago police? whether youth is going to have an opportunity to marry and start a home? whether adults are to be pitched into the industrial scrap heap at the age of forty-five? whether there is to be social security for all? whether our genuinely beautiful and shiny and marvelously efficient mass-production machinery is to rust periodically every eight or ten years? whether this marvelously effective life-giving machine that we call the motion picture is to languish, as far as school use is concerned, while two sixty-million-dollar death-dealing battleships may be made to gratify the whims of the militarists and jingoes?

If I may now paraphrase a suggestion of Wells', dealing with the novel, I would say this: Now you see something of the scope that I am trying to suggest for the motion picture. It is the device by which we get not merely knowledge but understanding, a tool by which we may critically examine the civilization in which we live. It

will throw the white light of publicity upon civic and social conduct—good and bad. It will not take merely one small segment of life — the exploratory, amatory activities of youth—but its lens will explore the whole human scene from childhood to old age....

"But don't our educational films already do this?" you may ask. My answer is, "No, they do not." Thus far in our motion-picture program we have done little more than accept typical school standards for certain knowledge that is to be transmitted, put this material into the form of acceptable motion pictures, and then use them in the classroom. We have continued to accept the cold-storage concept of education and have used films as a device for lowering the temperature of the refrigerator. We have failed to infuse our films with the emotional warmth that is necessary for problems and their solution if they are to be alive and functional in the lives of children and youth. We do have a film on the automobile, for example—the process, the mass-production technique — but we have no film which shows an automobile factory shutting down in 1929, and why it may shut down again in 1939, and again in 1949. We show the effect of mass production supplying of automobiles, but we don't show the effect of mass production on the worker himself. I except here Charles Chaplin's film "Modern Times," which showed that man has become an automatic part of the machinery. Again, we have films on lumbering, but we have no films showing that somehow or other the arrangement of our economic structure doesn't prevent a third of our population from living in inadequate homes. We have a film on electricity, but we have no film showing that only one tenth of our rural homes are equipped with electricity. Nor do we have a film which would show that by adequate planning there would be no need for paying five cents per kilowatt hour for electricity. We have, also, literally hundreds of films which show subtly or directly the advantages of the private ownership of industry, but we have few or no films to show its disadvantages, or, more important, certain advantages of public ownership. We have educational films on cotton growing—but only one film on the life of the sharecropper. We have educational films on health — but few or none which show that one third of our population is ill-fed, and this according to reliable statistics from the Department of Agriculture.

I am not criticizing these films as such. I am merely suggesting that they are often shown outside the context of understanding which would properly illuminate them. As such, they become unfocused information. I am suggesting that we put this kind of knowledge into focus, into context. What we need are techniques by means of which we can get some orientation, some pattern, as to the meaning of this knowledge, its functions. We need to be able to take this vast array of knowledge and turn it into a reorganized and reconstructed experience. I am suggesting here that we look into the possibility of the motion picture as device for giving social perspective, for giving a frame into which many pictures can be placed, for giving an outline of living, to give us an interrelation of knowledge, to humanize it for us.

Let me give some examples of the kinds of films that I am talking about. When major economic or political problems are discussed, especially those with world backgrounds or ramifications, it is common for even intelligent adults to throw up their hands and say, "It's too complicated for me. I can't understand it." The attitude may have wholesome implications, yet there rest in that attitude many sinister implications. Many of us will turn to the expert in these affairs and ask his advice about them. But it is also possible that we may trade our privilege of knowing about these things for a kind of government in which even our liberty of voluntarily seeking expert guidance is curtailed for an expected or actual security from economic difficulty.

One major problem in this field is the fact that the common man, the farmer, the worker in the factory, does not see the continuity of the process in which he labors. The farmer takes his wheat to the local elevator; he knows that it is shipped to Minneapolis, but does he see clearly the pattern of that wheat, the resulting flour, the resulting bread, as it enters into the channels of world trade? Does he see the beautiful, bountiful, competing fields of wheat in the Argentine, Canada, Russia? And similarly with the laboring man. Does he visualize his products being gathered today to make the final automobile? Does he have any notion of that automobile or that film or that bale of cotton as it is woven into the fabric of world events? Probably not. And verbal symbols frequently are of little value here, because the initial experience is lacking.

We need a series of films on science and the scientific method. Some of the films made by the producers as feature pictures will prove valuable. I have already reported the reaction of children to "The Story of Louis Pasteur." Our films on the scientific method should show clearly what controlled experimentation means. We might have children see on the screen, experiments which were adequately controlled, others badly controlled. They should have little difficulty in exploding one experiment by a medical man who tried to discover the effect of certain foods upon dogs. The experimental dogs were in the sunshine on the roof of a building; the controls were in a dark basement. "The Story of Louis Pasteur" did give us an example of a "control" group. The filming of "Arrowsmith" showed clearly the nature of controlled experimentation and the climax of the story had to do with the need for controls. Can you not easily visualize the setting up in films of a whole series of experiments as test situations where children and youth evaluate their adequacy, using quite simple criteria of course?

We need films which will illuminate and clarify the democracy-autocracy concept. What teaching film ever brought out the idea that the workmen are often mere automatons carrying out ideas or orders from above, that showed the resentment of these workmen at many of the efficiency systems set up to speed up production? What is democracy in the factory, the home, the school, the church, city government? It is a concept that has not been adequately explored; yet how valuable it would be to use films for

case studies of democracy and the democratic way of life or its absence.

The whole field of public health and proposals for socialized medicine needs to be explored through the use of films. I just received the other day a pamphlet titled *Doctors, Dollars, and Disease,* by W. T. Foster. It shows, for example, that 10 per cent of families bear 41 per cent of medical costs; 32 per cent bear 41 per cent; and 58 per cent bear only 18 per cent. Sickness costs, therefore, fall unevenly. It shows, too, that nine out of ten children have decayed teeth or other diseases of the mouth.

The whole field of taxation — national, state, and local—is in a mess. The Twentieth Century Fund recently had a group of experts working in this field and reported their findings in a volume titled, *Facing the Tax Problem.* There were press releases to the public. And yet I venture to say that not more than half a dozen among my readers have the faintest conception of the recommendations of these experts. We have a similar situation in the field of government. Look at the antiquated system that we are using all over the United States to administer and support public education. In one state alone there are more board members than teachers. Yet some states have attacked quite successfully this whole question of state school finance and administrative units, Ohio especially. Why not films which can be used with Parent-Teacher Associations all over the country, and which will bring out clearly the ramifications of the problem and the proposed and effective solutions?

In his splendid book, *Youth Serves the Community,* Dr. Paul Hanna of Stanford University has now outlined very clearly what young people can do in their various communities to help make life more coöperative, less individualistic. But how much more valuable it would be to see and hear these young people planning, discussing, carrying out, evaluation of their own work on the screen! Not many school people and few youth will read Dr. Hanna's book; but shown on the screen it might be seen by hundreds of thousands.

Now we come to the heart of the question. This is all very well, you say, but who is going to pay the bill for these films? I am first going to answer this question by raising others. Who pays the billion-dollar motion-picture theatre bill each year in the United States? Who is going to pay the bill for the two sixty-million-dollar battleships that we are now building or about to build? Who pays the bill for the loss of the productive capacity of our modern industrial economy that occurred during the depression — a loss of some three or four hundred billion dollars? Who pays the bill for inefficient administrative organizations in our states and counties? We must remember that good education pays for itself socially. A good film program, even if it were only 5 per cent efficient in correcting some of these abuses, would pay for itself.

Who would pay for it? In Ohio, through a three-dollar tax on each reel of film censored, a sum of money to the extent of about $60,000 a year is being used to make films dealing with Ohio, to purchase films and slides for use in Ohio schools. Even if each state made only one film on govern-

mental problems, a respectable library would be developed.

Who would pay for it? In impoverished Germany literally millions of dollars have been collected from school children, about 20 pfennigs a year each, to finance an educational film program which, as far as mechanical details are concerned, far surpass anything else in the world. If each school child in the United States were to give up only one ten-cent movie for this purpose, more than two and one-half million dollars would be available.

Who would pay for it? The United States government is already engaged in a big film program. Its film, "The Plow that Broke the Plains," has already been seen by several million people. It is estimated that "The River" will be seen by 50 million people. Who can measure the money return through the increased sensitivity to soil problems and flood control that these films develop?

And why shouldn't some of our adult education groups bend their efforts in this direction? Some of them have. But just see what a tremendous library of excellent films we could have if such organizations as Rotary, Kiwanis, League of Women Voters, the A. F. of L., the C. I. O., religious groups, merely made one excellent film each. Today none of them has done more than scratch the surface in developing real educational programs.

The difficulty with our film program, as well as with the rest of our educational program, is that we have been trying merely to improve by slight or greater degree, what we have already been doing. This may be commendable when what we have been doing in the past has been in the right direction. But let us not do better with films what ought not to be done at all. Let us not use films merely for the purpose of securing unrelated, unintegrated increments of fact and knowledge.

Further, we have not only failed to hold our factual accretions together with the integrating power of purpose or direction, but we have also failed to keep them together with the cement of emotion. Education has been predominantly intellectualistic and has looked with disfavor upon emotion. Neither can or should exist without the other. The false dualism between emotion and intellect must be dispelled.

We have, it is true, accomplished a good deal with the motion picture up to now. We have produced many excellent films. But these films have not been adequate for the purpose of showing youth the problems that not only face them as individuals but are facing our American civilization today. We have used these films too much as a device for accumulating facts and too little as a device for improving the quality of human behavior.

Once we have an adequate philosophy of what we were attempting to do in this country, such films would be useful in indicating the means for achieving these ends. We must increasingly make boys and girls aware of what the information they learn is for. If they do not clearly see the problem which it helps to solve, then the information is useless and is quickly forgotten.

It has been the purpose of this paper to indicate the need for a much

deeper insight into the contributions of the motion picture as an agency of communication. Our objectives for the motion picture in education have been too largely informational. We have not seen clearly enough the power of the motion picture to reconstruct and revivify experiences. We have not realized the power of the screen to give social and historical perspective on current problems. We have failed to use the dramatic power of the motion picture to warm problems that are often intellectually cold. We have not explored the power of the cinema in developing social sensitivities, interests, and attitudes.

These, then, are new objectives for the film about which every one of us must think deeply.

THE SOCIOLOGICAL APPROACH TO MOTION PICTURES IN RELATION TO EDUCATION

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The motion picture is one of the strongest influences outside of the school in molding and developing the child. Dr. Thrasher analyzes the implications of this fact for EDUCATION *in his customary thorough-going and effective manner.*

THE educational sociologist insists that it is the function of the school to deal with "the whole child in the total situation." That it is the unquestioned duty of education to minister to the needs of "the whole child" has been increasingly recognized by educators. The United States Commissioner of Education, J. W. Studebaker, points this out in a recent statement:[1]

"The new and expanded task of organized education is an increasingly complicated one. Education must take the children younger and keep them longer. It must broaden the scope of its offering in order to satisfy cross sections of all the learners of high school and college ages and of adults in general. It must lengthen the regular terms of schooling and find suitable educational activities for what has been a vacation period. And most important and most difficult of all, it must minister to the whole personality of the learner, not just to his intellect. In these ways organized education hopes to do its full and indispensable part in preparing and guiding a citizenship capable of making our democracy work."

Educators have not been so quick, however, to see the importance of the educational implications of the social background of the school child,—the total situation. While there are many shining exceptions, teachers and educators in general still have the conception that education should be confined to the formal procedures taking place within school buildings during school hours. It has become increasingly apparent to educational sociologists, engaged in various types of research throughout the country, that informal education both within and without the school plays a very great part in molding and developing the child. That the schools have a definite and large responsibility in controlling and directing the various processes of informal education cannot be doubted.

1 "Expanding Functions of Education," "School Life," December, 1937, page 106.

Formal education itself is dependent in so many ways upon the social background of the child that it is impossible for school procedures and school curricula to be set up without reference to their relationships to the various social influences outside the school. In order to function effectively the school personnel must be thoroughly familiar with these social influences and their implications for the development of the child.

What are some of the social backgrounds of the child of importance to the classroom teacher, school principal and other members of the school staff? Home conditions, of course, are outstanding among the factors which condition school work and to which school work must be adapted if it is to meet the real needs of children. The visiting teacher movement, the guidance clinic, the parent-teacher association, and similar groups and organizations have been designed to bring the school and the home closer together. There has been a tendency among school people, however, to overlook many other important social influences playing upon the child. Among these are the play groups, gangs, and casual influences in the local neighborhood; after school and Saturday employment; and private, public and commercialized recreation. All these social factors are of vital importance to the child in the development of his skills, his information, his personality, and his character. They have wide implications for future citizenship and the school needs to keep thoroughly informed as to how they are operating upon its clientele, if school procedures and curricula are to function most effectively.

Among the most important social influences which play upon the child are his reading, his radio listening, and his attendance at motion pictures outside of school hours. There have been too few attempts on the part of the school to tie up English courses with actual reading habits involving the Sunday papers, pulp magazines, and other current materials of great importance to the child's ideation and attitudes. Guidance with reference to radio listening is also conspicuous by its absence in the standard school system. Appreciation of motion pictures has been introduced in a half-hearted way into many schools. There is a general lack of understanding of the motion picture, however, especially of the entertainment film and its potentialities, on the part of school people.

It has been shown by scientific studies that motion pictures of the entertainment type seen in the theatre are tremendously important in imparting information and developing attitudes both in children and adults. In his summary of the Payne Fund Studies, W. W. Charters, Director of the Bureau of Educational Research at Ohio State University, points out the extent to which children acquire facts from the movies:

"If parents take their eight-year-old child to the movies, he will catch three out of every five items that the parents catch. In general the second and third grade children at the end of six weeks remember 90 per cent of what they knew on the day following the show. Three months after seeing a picture they remember as much as they did six weeks after seeing it. Of interest is an implication lying within the fact that very young children remember correctly 50

to 60 per cent of what they see. . . . Children of all ages tend to accept as authentic what they see in the movies."[2]

Dr. Charters further indicates the importance of the movies in developing and changing the attitudes of children:

"The outstanding contribution of the study (of Peterson and Thurstone) is the establishment of the fact that the attitude of children toward a social value can be measurably changed by one exposure to a picture. . . . The investigators found that the effect of pictures upon attitudes is cumulative. . . . They (Peterson and Thurstone) have shown that the shift created by exposure to a film has substantial permanence."[3]

The average attendance of the school child is one motion picture a week. Many children go oftener. In the light of the researches which have been made as to the effect of motion pictures on children, there can be little doubt but that the motion picture is one of the most important educational influences of modern times. The studies conducted at New York University of the social rôle of the motion picture in an interstitial area confirm this point of view.

Yet the problem is not a simple mechanical one of each movie having a specific effect on every child. Paul G. Cressey, in the development of the New York University studies, has shown that "instead of its being considered a unilateral force whose influence can be described as 'contribution' or 'effect', the motion picture is seen as one whose influence is everywhere modified by differentials in community and personality." It is important for the teacher and school administrator to recognize the nature of the social and imaginative processes which condition the response of the child to the wide variety of motion pictures which are presented in the theatres as well as in the school itself. Just as the effect of the school upon the child can be understood only in terms of the varied social backgrounds the child brings to the school, so the effects of motion pictures upon children can be understood only in terms of variations in social background and experience of the children themselves.

In clarifying these points Paul G. Cressey has made a real contribution to the sociology of motion pictures. In his address before the Section on Educational Sociology of the American Sociological Society (Christmas meetings, 1937) he has the following to say on this point:

"Indeed, whether a film's contribution would be regarded as 'socially-desirable' or as 'socially-undesirable' has already been found in a great many cases to be determined, not by its contents *per se*, but by the individual perceptions and the social values which are brought to bear upon it, by the moods and interests from which it is viewed, and by the personnel and *esprit de corps* of the group in whose company it is seen.

"Thus, to take but one illustration, a gangster film's net contribution to a personality or community cannot well be understood except in terms of its meaning to its spectators. Early in our study in New York City we became aware that in our area of special study—an area of high delinquency—interest in gangster films was exceptionally high among boys and young men; and it was obviously possible to jump to the conclusion that it connoted some undesirable influence,

2 Quoted from "Motion Pictures and Youth: A Summary," pages 8-9-10. These statements are based upon the study by P. W. Holaday and George D. Stoddard entitled "Getting Ideas from the Movies." Both volumes are published by the Macmillan Company, New York, 1933.

3. Op. cit., pages 20-21-22-23. These statements are based upon the studies of Ruth C. Peterson and L. R. Thurstone which are reported in their book entitled "Motion Pictures and the Social Attitudes of Children," published by the Macmillan Company, 1933.

in the main, of these films. Yet individual studies revealed that in the preponderance of cases this youthful enthusiasm reflected, not criminal impulses which were being stirred by these photoplays, but the fact that crime and racketeering was an unusually live issue in this community. Whether one should 'go straight' or 'join up' was much more than an academic question for some of these boys; and in this setting most of these films appeared, in a majority of instances, to have been a salutary influence. And in those authenticated instances in which these films served as a source for techniques of crime later used in crime, as a stimulus toward further crime, or as a means by which the youth might idealize himself and his criminal activities, there was revealed in every case specific social background values and concurrent personal interests or experiences which appeared to have motivated this selection from the film content. In this way, through study of other phases of cinema responses as well as that reflected in criminal behavior, it has gradually become clear that the contemporary theatrical film functions inevitably, though quite incidentally, as an instrument of informal education; and that its significance to those who see it is determined, to an exceptional degree, by their social background and their personal problems and interests at that time."

A sociological approach to the motion picture is important because many other approaches which have been made in the past few years have lacked the perspective, suggested by Cressey's work, necessary to make possible a scientific or even a rational attitude toward the practical problems which have arisen around the motion picture. Such practical problems are important in a democracy because they involve fundamental questions of social control such as censorship and freedom of expression; trade practices, competition, and monopoly; the development of the motion picture as an art in relation to a mass audience; the utilization of motion pictures by schools; etc.

One only has to examine some of the recent literature on motion pictures to become aware of the shortcomings of parochial, particularistic and biased approaches to the subject. Studies inspired by the industry itself, of course, are inevitably biased and though they may be considered on their merits, must be discounted accordingly. The work of reformers who are interested in attacking the motion picture as a menace to society, on the other hand, is equally unreliable even though it may take the guise of a popular journalistic interpretation of scientific findings.

Even eliminating the bias of the industry and the reformer, however, there is still a need for a sociological as differentiated from a more particularistic approach to motion pictures. The approach of any particular discipline to an interpretation of motion pictures is quite likely to be particularistic or parochial, whether it be from the standpoint of philosophy, education, economics, or what not. Sociology's peculiar contribution to the interpretation of current human phenomena and problems is to see them in the light of their total social relationships. An institution must be studied in all its relations to other institutions in the community and to the culture as a whole. The motion picture experience of children cannot be segmented from the total stream of their experiences nor can movie-goers' reactions to the films be understood apart from the varied social back-

grounds from which different classes of movie patrons are drawn. This fact has been overlooked in most literature dealing with the motion picture in its relation to children.

A recent book, which has attracted considerable public attention, perhaps on account of its shortcomings as well as its contributions is Mortimer Adler's *Art and Prudence,* and this book is a good example of the fallacies not only of a particularistic but also of a biased approach to the subject of motion pictures. This book performs a definite disservice to the cause of clear thinking about motion pictures. It does this for two reasons: first, because it is completely out of tune with the spirit of modern science; it substitutes authority and sophistry for scientific thinking. Secondly, it is confusing to all but the trained worker in philosophy or social science because the specialist in other fields or the educated layman are likely to be taken in by Adler's pompous exposé which becomes impressive merely because it is ponderous and often inscrutable to the naïve reader.

The result of these varied points of view with regard to motion pictures has been considerable confusion in the minds even of professional people. Certain points are clear, however, and should be emphasized: In the first place, the schools can make large use of the entertainment film even though it is shown in the theatre. They can exercise their indispensable function of guiding young people in the selection of motion pictures to be seen in theatres provided teachers and educators are informed as to the complex problems of the motion picture as an art, as a technique, as an expanding medium of expression, as an educational instrument, and as a social influence. To this end a course has been developed at New York University adapted to the needs of teachers, school administrators, social workers, community motion picture workers, and others interested in the social values in the entertainment film. This course has not been conceived of as a technical course in the processes and methods of visual instruction in the schools, but rather as providing an orientation in the whole field of motion pictures. The course is planned to give the teacher a broad background of knowledge and appreciation of motion pictures, both indispensable in carrying on school activities related to the cinema. In pursuance of this purpose the course has been organized for the presentation of the following topics:

> The history of the motion pictures; their scope, range and limitations; their technical problems and development, such as sound, color, animation; their artistic problems involved from the preparation of the script to the final completion of the picture; and various problems of the industry such as production, distribution, exhibition and trade practices.

After this ground-work of understanding of fundamental motion picture problems is laid, the student is next introduced to the educational and social aspects of the film and the various ways in which the schools can relate themselves advantageously to motion pictures. Since the inception of the New York University course, many colleges and universities have followed suit in presenting motion picture courses. It is hoped that these courses throughout will stimulate a wider in-

terest on the part of teachers, principals, and school people in general, in becoming acquainted with motion pictures, not only as a medium of visual instruction in the schools, but as a great potential resource in the community for making education more effective.

Some of the practical ways in which schools participate in the solution of motion picture problems are as follows:

(1) The introduction of motion picture appreciation courses as units of study. This is highly important in order that children may learn to discriminate between worthless pictures and those which are socially valid and artistically adequate. Such discrimination naturally registers at the box office and encourages producers to make more acceptable pictures.

(2) School motion picture clubs as curricular or extra-curricular activities not only increase the appreciation of children for good motion pictures but they serve a variety of educative purposes. Two types of clubs are in evidence in the several hundred groups which are active throughout the United States. The first is the reviewing club which views and discusses pictures, rating and classifying them. The second is the club which produces pictures. Photoplay clubs which make their own pictures are carrying on a worthwhile hobby which has many incidental learnings involved in writing scenarios, in preparing costumes and settings, in learning the various mechanical processes connected with filming the pictures, and in developing, editing, and projecting films. Many such clubs have produced films on school subjects, have made school newsreels, or have devoted their films to topics of interest to the whole community. In many cases dramatic films have been made in connection with English or other school classes.

(3) Some schools have been successful in "selling" the school program to the community through the skillful use of motion pictures which visualize and explain various school activities to parents and taxpayers.

(4) The school may take an active part in a community motion picture program in which many other agencies participate. The organization which carries out such a program is usually a community motion picture council in which the school plays an important and essential part. These councils have pointed out the importance of the teaching values in motion pictures, both of the entertainment type and in those especially designed for visual instruction purposes. In approaching their problems sociologically, they have attempted to relate their activities to other recreational, educational and social agencies, so that the motion picture would not be regarded as an isolated experience, but would take its proper place in the total configuration of the community pattern. On a larger scale these councils have performed an important function in coördinating and integrating motion picture activities and interests. An example of this type of organization is the Metropolitan Motion Picture Council which serves as a clearing house of information of motion pictures for New York's metropolitan area. It also provides a machinery for coöperation on motion picture projects of mutual interest to the various agencies in the Council.

The motion picture council movement has attempted to enlist all the social forces in the community to commend, support and aggressively strive for wholesome and artistically adequate motion pictures. It is essential that parents, educators, librarians, and other adults keep informed with regard to motion pictures in order to guide children in the selection of films and to stimulate the discussion, based on films seen together, of life problems between the adult and the child. It is essential that all adults in the community learn to be more discriminating in their own patronage of motion pictures in order to encourage the production of artistically adequate and socially valid films by supporting such films at the box office. In order to carry on these functions a continuing survey of sources of available films on all types of subjects is necessary. It is recognized, of course, that any community motion picture program must be adapted to local conditions.

In conclusion it is well to remember that the film is more than a visual aid. In the words of Mark A. May:[4]

"The most important reason why the use of motion pictures in the schools has lagged so far behind in the development of the entertainment field is briefly that educators have fallen into the habit of thinking of the film as a 'visual aid' and have, therefore, not foreseen its full educational possibilities. Granted that the motion picture is undoubtedly a great aid in the teaching of the course of study as outlined in the lesson syllabi and in the textbooks, nevertheless this use does not by any means exhaust its educational potentialities. I predict that before many years have passed the motion picture will rise from its present subordinated position as a 'visual aid' to at least a coördinated position with the leading subject matter of the curriculum; and that it will become an integral part of the course of study and generally regarded as one of the indispensable elements in the curriculum."

4 "The Possibilities of Motion Pictures," "Journal of Educational Sociology," November, 1937, page 58.

"AND STILL THEY GAZ'D . . . "

CHARLES F. HOBAN, JR.
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The right kind of motion pictures will do much to overcome the tyranny of words in education is Dr. Hoban's belief. His article is provocative. Don't fail to read it.

YESTERDAY most "classroom" motion pictures were as dull as textbooks. Today they are duller. Improvements in typography, design, illustration, style, and substance have made the textbook a competitor with the extra-school press for child and adolescent interest.

Not so our "classroom" movies. They have not kept pace. Most of the basic silent educational films found in school libraries were produced nearly fifteen years ago, and most of the films in our educational libraries are silent films. Theatrical films of that era are now museum pieces. Film societies have been formed all over the country to study them for the relation they bear to modern movies.

Some sound films have been produced for schools. In general, the photography has been more recent and consequently these films are an improvement over the older silent ones. But the sound used in these films is little more than verbal comment in the manner of the voice in the newsreel. Of course, there are notable exceptions.

Many film subjects do not require sound. As far as we know, cell division in the amoeba is not raucous. Other film subjects do require sound. Otherwise, pupil experience is like watching a riot from a sound-proof cell. Still others depend on sound to carry the emotional meaning of a situation. For instance, background mazurka music was used in "Conquest" to symbolize the social atmosphere conditioning Napoleon's decision to marry into the Hapsburg family and hence his psychological distance from the French revolution. But for the "classroom" film there is only discourse — oral or written.

This situation is not difficult to understand if we teachers would stop talking or writing long enough to contemplate our inordinate disposition to traffic in words and to boycott all other forms of experience in classroom education. There are even signs of a recrudescence in the verbal approach to education. We hear and read of a higher education by means of the "hundred best books".

But "higher education" implies the previous existence of "lower education". We cannot apply this continuum-concept to the mechanical structure of the educational system from the kindergarten to the university because those most vocal on the problem of university education are unwilling to concede that much "education" exists below the college level. We must, therefore, restrict our concept of "higher" to the orders of experience leading to abstraction, generalization, and application of principles. When we prescribe the "hundred best books" we are assuming that these books contain "the best that has been thought and said" by historic man, hence all the best abstractions, gener-

alizations, and principles that man has discovered since he inhabited the earth. Hence, by reading the right "hundred best books" we become the incarnation of the sum total of human wisdom.

It can be assumed that those advocates of higher learning through the medium of books are thoroughly aware of the nature of abstraction and of the experience essential to meaningful abstraction, but unfortunately there has been a strong tendency for disciples of our frontier thinkers to take over the simple formulas and the cliches without also taking over their total meanings. Discussion of curricula based on purely verbalistic experience constitutes a real danger when verbalism is not related to other kinds of experience and when abstractions are not related to the data from which the abstractions are drawn.

We need to be concerned with the processes of abstraction, generalization, and the application of principles in education. We need also to be concerned with providing experience from which abstractions may be made and to which principles may be applied.

Abstraction is the process by which an individual extracts from sense data the essence of the sense data. Such a process is dependent from the very beginning on sense experience, and to develop a type of behavior which embodies the application of basic principles to life we must provide a wide variety of sense experience out of which the processes of abstraction, generalization, and application arise.

Furthermore, we must consider that abstraction is a process peculiar to an individual, and that every meaningful abstraction must be made by the individual from his own experience. There is no way by which we can transmit sheer abstractions to a group without enabling the individuals of the group to progress through all stages of experience inherent in the process of abstraction. We can only transmit abstractions through symbols, and symbols have no meaning to an individual unless the individual has had the experience symbolized.

In educational practice we have generally ignored these fundamental concepts. We have attempted to transmit abstractions to our pupils in a vacuum. We have not yet learned that pupils do the learning and that we must, therefore, permit them to learn. In our typical classroom proceduce there has been too much so-called "teaching" and too little real learning. How can motion pictures be used to improve this situation? Through their pictorial and auditory stimuli which provide a basis for sense experience, motion pictures also provide a basis for abstraction. But merely to introduce motion pictures into the classroom is not to improve education. If the films are produced under the "teaching" concept, and are used as a new mechanical tool for "teaching," there is no necessary improvement in learning.

Motion pictures are highly selective in content, and hence, in an elementary sense, abstractive. A camera does not record everything that goes on in a situation. It records only a fractional part—that part which the director believes to be significant to the larger purpose, concept, or principle that he desires to communicate to his audience.

The abuse of the selective nature of the motion picture has shorn the motion picture of much of its value in the classroom. The addition of verbal comment to the old "teaching" pattern has added little to its effectiveness.

If we agree that abstraction is an individual process and that its results cannot be transmitted *per se* to another individual, it behooves us to examine our current classroom motion pictures with a critical eye. In so doing, we find them highly condensed, academic, over-simplified, and designed for mental osmosis. No sooner does the camera open its lens than the commentator, whether he be speaking or writing, rushes forward and explains the abstract significance of the one grain of visual wheatfield that has been flashed on the screen. If it is a "sound" picture, he must talk fast and furiously because he knows the camera will be moved in a few seconds, that the object of the lens will be new and different, and that he must have mastered oratorical breathing to be able to comment on the next scene without becoming hopelessly lost in the whirling kaleidoscope. Meanwhile his audience, not having rehearsed the script, flounders.

What has happened to our "classroom" movies is that we have tried to fit a new medium of educational experience into our old pattern of verbal teaching. We have failed to use this new medium to provide the type of experience lacking in pure linguistics. We have minimized the visual content of the motion picture. We have depended on words to provide the abstractions.

What we should do is use the medium for what it is—a motion picture, not an illustrated lecture. We should tell our story through pictures and sounds and let the learner do the abstracting. A word here and there may tide us over the bumps of editing or call our attention to the significance of things not directly portrayed in the film. But the story should be told in film. And the audience should have an opportunity to experience for itself, to absorb the stimuli, and to evaluate its significance.

Let us see how this concept applies to "classroom teaching." One of the objectives accepted for the teaching of geography is an understanding of cause and effect relations as they apply to man's adjustment to his environment. In our zeal to be "educationally" effective and geographically respectable we reduce the causal factors to moisture, terrain, and thermal conditions. We teach that man builds a square, flat-roofed house in flat country where there is little rain, and that he builds high-pitched roofs where there is much rain and snow. We also teach that man wears trousers in a cold climate and loose skirts in a hot climate. We teach that he raises tobacco in the south and wheat in the north—because of geographic factors. It is somewhat disturbing for our pupils to find Pennsylvania Germans raising both tobacco and wheat, but we can still "explain" this situation away by juggling terrain, temperature, and moisture.

We reduce everything to simple causes. We explain everything in terms of physical environment with our three simple words. Man is just an animal getting out of the rain,

seeking shelter from the sun, and conforming to the law of gravitation and to a somewhat obscure principle of altitude.

Knowing our three geographic factors of causation, students of geography find no problem in the dust storms. The causes are quite simple. In the area now known as the "dust-bowl" there is little rain, no rivers, high wind, and no mountains. When the soil is exposed to the hot sun and the high wind, it is dried and blown away. Obviously the solution is to turn off the sun and blow out the wind. Or is it?

In our typical classroom film, such a solution would probably be the logical sequence to the presentation of the topic if the topic were presented in a "classroom" film — which it has not been. We would be shown a map of the "dust-bowl" area. Some animation would be included. Animation is always good technique in a "classroom" film. Then we would be told that there were high winds. It would be difficult to show high winds blowing without trees, and there are not supposed to be any trees in the "dust-bowl". Then we would see a farmer plowing a level piece of land. This would probably be taken from some German instructional film, since it is traditional that no respectable producer of "classroom" films would ever take a picture of an actual situation in the United States. That is what film vaults are for—to supply stock shots. Then we would be shown some dust clouds, snipped from newsreels several years old. Probably at this moment we would return to our animated map and some white arrows would dance on the black map and the commentator would continue to rush through his explanation. Somewhere we would see happy homesteads and prosperous farmers, in a before-the-storm sequence. Later we would see abandoned farms and mountains of dried earth. At every step we would be told what happened and how what happened was related to the geographic factors of temperature, moisture, and terrain. After the showing of the picture the pupils would "know" a great deal about the dust storms. They would be able to "explain" the significance of the "dust-bowl" in geographic terms. The fact that they had read about the storms in the newspapers, that they had seen famous government pictures of parched land, cows' skulls, and abandoned farm equipment, and that they had seen newsreels of the storms and of the desolated farmers, would have little significance. The important thing is that the pupils now "know" the causes. And the causes are verbalized in the picture.

Now let us see how the same situation was portrayed in a film produced by a branch of the federal government for use in theatres. We still have the commentator but he is less persistent though somewhat more insistent. We find the film opening with the same map, though with less animation. Then the film fades into slow-moving shots of cattle and cattlemen wandering into the prairies. We are permitted to get the feel of the cattle on the prairies. They stay on the screen long enough not to be forgotten. We hear throughout a music of movement, of the frontier, of the plains, and of cowboys. Then the scene changes. The plowman follows the herd. The homestead act is passed and there is a mad

scramble for land. The first fence is strung. The cattle are pushed westward. Wagon loads of new settlers rumble onto the plains. The plow begins its work. The music changes. The old cattle songs take on an ominous key. As the plows bite into the fertile soil and the new machinery we have invented reaps the golden harvest of the prairies, the music grows faster, and faster, and mood changes from the lulling note of the cowboy ballad to one of reckless irresponsibility. We begin to feel the danger. We want to shout to the farmer to warn him of impending tragedy. We want to tell him that he cannot disregard these same old geographic factors. But he is making money. His wheat is bringing high prices. He has a fine home, large barns, new machinery. He has a strong wife and many fine strong children. He will not listen.

And so throughout the picture we feel the situation. The causes are not named. We see them operating. We find nearly twenty causes of the "dust-bowl." They are not simple. They are complicated. Terrain, temperature, and moisture are still there. But many other factors are introduced. The war booms. New demands for wheat. The plow and the harrow are the bayonets of the farmer, the tractor his tank. Wheat will win the war! Wheat for the Belgians! Wheat for the English! Wheat for the French! . . . Wheat for everybody! Wheat will win the war! The printing presses whirl out propaganda. Land promotion companies spring up and lure the farmer to cheap land and quick profits. Later follow the unforgettable scenes of the dust storms and their tragic consequences. So is told the story of human motive, human error, human shortsight, and nature's terrible price.

In this picture we live through the causes and the results. They are there for us to abstract. Once we discover them, the understanding of the situation is ours. The thirst for further explanation is ours. The need for further action is ours.

But "The Plow That Broke the Plains" was produced to educate—not for "education."

A CRITICAL EVALUATION OF TEACHING FILMS

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At long last teachers in the field have been given an opportunity to evaluate a library of classroom films. Mr. Lemler tells us in his article what thousands of teachers in the State of Indiana thought of 400 motion pictures as instruments of instruction. We need more studies of this type.

SEVERAL factors contribute to the dilemma of the educator who is conscientiously engaged in the task of selecting films for his teaching program. He faces a mass of picture material offered for school use, some of which would positively degrade good teaching, much less supplement or enrich it. He faces a multiplicity of film sources and inadequate catalog descriptions. He cannot benefit by the experiences of other educators because their judgments have not been compiled. He has no choice but to screen materials, good and bad, to determine general merit and possible application to the local curriculum. His efforts to sift from the mass of questionable material those subjects which possess definite educational merit are time-consuming and discouraging. At the outset he is convinced of the potential contribution of films to teaching, but by the time he has sampled any quantity of the film material flooding the field, he is much inclined to doubt it. In this plight he would welcome the results of any truly critical and unbiased attempt to evaluate available films.

In recognition of this film selection problem, the Bureau of Visual Instruction of the Indiana University Extension Division engaged in a trial evaluation project last year and attempted to gather the cumulative experience of teachers with reference to films distributed from that point. The study attempted not only to determine the general merit of particular films, but also how well they could be used at specific levels and in specific subjects. It is impossible within the scope of this article to present this detailed information. However, the criteria by which the films were rated and the procedure followed in obtaining the evaluations are described here. Also, several questions of interest and importance in the field of visual instruction are considered in the light of the film evaluations.

Criteria

Evaluation implies that there should be criteria by which the relative quality of films may be judged. In order to build a set of standards which would function in film evaluation, the literature in the field was examined carefully, and a comprehensive list of ideas was submitted to a group of fifty teachers who selected the items which they considered most important, phrased them in a form of questions, and grouped them under Film Objectives, Film Content, Development of Content, and Technical Quality. From this activity the following evaluation form emerged. Teachers were instructed to evaluate films by checking

each question "Yes" or "No" or by rating each item "Excellent," "Good," "Fair," or "Poor." Additional information was required by the form concerning the subject and grade in which the film was used.

EVALUATION FORM

	Yes	*No*	*Rating*
Film Objectives			
1. Does the film have obvious objectives?	.....	.....	.....
2. Are the film objectives in keeping with teaching aims at the particular level?	.....	.....	.....
3. Are the objectives sufficiently limited to permit adequate treatment?	.....	.....	.....
Film Content			
1. Is the film content accurate?	.....	.....	.....
2. Is the film content adapted to modern courses of study?	.....	.....	.....
3. Does the content appeal to student interests at the intended level?	.....	.....	.....
4. Does the film include only the important, significant, and pertinent materials necessary for proper understanding and the attainment of objectives?	.....	.....	.....
5. Does the subject demand action and movement for effective treatment?	.....	.....	.....
6. Are subtitles brief?	.....	.....	.....
7. Does the film have a good study guide?	.....	.....	.....
8. Is the subject one which cannot be presented as well by the use of other visual aids?	.....	.....	.....
Development of the Content			
1. Is the film so organized as to challenge attention and interest?	.....	.....	.....
2. Are ideas introduced in the order of best learning?	.....	.....	.....
3. Does the presentation challenge further activity?	.....	.....	.....
4. Is the film a unified presentation?	.....	.....	.....
5. Is sufficient emphasis given major ideas?	.....	.....	.....
6. Does the film attempt to supplement rather than replace the teacher?	.....	.....	.....
7. Does the presentation insure understanding?	.....	.....	.....
Technical Quality			
1. Are pictures sharp and clear?	.....	.....	.....
2. Is the film steady?	.....	.....	.....
3. If the film is a sound film, is the sound reproduction clear and undistorted?	.....	.....	.....
4. Is the pictorial composition in each scene pleasing?	.....	.....	.....
5. If there is acting in the film, is it genuinely good acting?	.....	.....	.....

Procedure

Data from three different sources were used in the project. A total of 5,059 teacher judgments on films distributed over a period of four months was collected by means of the evaluation form. In addition, 3,250 useable evaluations were secured from voluntary teacher reports collected by the Bureau over a period of two years. The data from this second source were less objective than the information from the questionnaire but proved useful in verifying final ratings. As a further check, the writer screened all films in question, and made his personal evaluations.

It was considered expedient to treat

evaluations on a numerical basis. Therefore, weights were assigned to the various items in accordance with their relative importance so that a "perfect" score would total 100. There was a real danger in such weighting, which lay in the fact that the absence of an important quality ought to disqualify a film and yet might not sufficiently reduce the numerical score. Fortunately, however, through the inter-relationship of the various items, the standards functioned as a system of checks and balances; weakness in an important trait showed up in ratings on other items; and the score was correspondingly lowered. These numerical scores were examined carefully for agreement. Where such agreement existed, films were given final ratings of "Excellent," "Good," "Fair," and "Poor." Only those films which received ratings of "Excellent" or "Good" were recommended as teaching aids.

General Results

Of the 392 films for which sufficient data had been collected to assign final ratings, 186 received ratings of "Excellent"; 126, ratings of "Good"; 55 were marked "Fair"; and 29 were rated "Poor." In other words, from a library of 400 films selected with considerable discrimination, a total of 84 subjects could not be recommended as first-class teaching aids.

These results, together with the suggestions and criticisms collected by the evaluation form, led to a consideration of the following questions: (1) In what respects may teaching films be improved? (2) In what fields are more and better films needed? (3) How do "industrial" films compare with films made primarily for teaching purposes? (4) How do sound films compare with silent films as teaching aids?

Needed Improvement in Teaching Films

A survey of the data for all films evaluated revealed a concentration of low ratings around certain items in the evaluation form. This survey showed that the items relating to film objectives and film content were rated notably low. Teachers were especially consistent in the belief that available teaching films not only included extraneous materials but omitted other materials of importance and significance. This is a valid criticism. Too many films in geography, for instance, include all kinds of scenes except those which can best be used to build adequate concepts concerning man's adaptation to his natural environment. Films picturing industrial processes are so concerned with the processes that they seldom provide even a fleeting glimpse of the economic conditions and the lives of the people who engage in those industries. In the revision of films, therefore, and in the production of new subjects, film content materials should be more critically selected and more attention should be given to the social aspects of existing courses of study.

Teachers were in further agreement in many cases that the subjects did not require the animation of the motion picture for effective treatment and that the topics could be illustrated as effectively by other visual materials. This is a very serious indictment which the writer hesitates to make concerning the whole field on the ba-

sis of the tabulated data. Each film, however, should add something over and above what is possible with other visual aids, and in the analysis of film content materials for film production purposes, constant consideration must be given to the question of suitability to the medium.

Concentration of low ratings around the items dealing with appeals to attention, interest, and further activity, indicated needed improvement in methods of development and organization. The dry essay type of exposition which is the rule with teaching films seems to have arisen as a defense against the idea that visual aids make learning too easy, or as a check against the common tendency to use the film as a schoolroom entertainment device, or as a by-product of the discredited educational theory that a school subject has merit only if it is difficult and uninteresting. It is not suggested here that the teaching film incorporate the glamour of Hollywood showmanship; but the attention-getting devices, the dramatic and narrative techniques, and the other methods which have made the motion picture an effective medium of modern communication, offer much to the educational film.

Fields for Production

A quality-quantity comparison, made possible by the evaluation project, revealed that new and better films were especially needed for history, civics, vocational guidance, music appreciation, literature, and that many geography films and existing subjects in natural science should be revised to meet modern teaching needs.

The most glaring need for the social studies field is the production of films of the "documentary" type which explain a social problem and point the way to a possible solution. These films may involve controversial issues, to be sure, but the school cannot avoid such questions and still expect an ultimate, intelligent solution. Subjects which might lend themselves to documentary treatment are: "The Spoils System," "Taxation," "The Tariff," "The Labor Question," and "The City Tenement Problem."

Teacher comments and suggestions collected by the evaluation project raised an important question concerning the length of teaching films. Is there anything sacred in the traditional never-varying 400-foot reel? Why should not short bits of film of 50, 100 or 150 feet in length, covering many specific topics in which motion is an essential factor, be used as effective teaching aids? A collection of such subjects might include a gushing oil well, making adobe brick, using the potter's wheel, a camel caravan en route, placer mining, etc., all of which could be filed just as lantern slides or flat pictures are filed for convenient reference when needed. The possibility of including such film sequences in a basic "encyclopedic" library for schools should be seriously considered.

"Industrial" versus "Non-Industrial" Films

Films which are made available for free use by schools from commercial sources whose chief purpose is to advertise their products are commonly called "industrial" films. The final ratings for 43 "industrial" films were examined to discover how satisfactorily films of this type met the criteria.

None of the "industrial" films received a mark of "Excellent." Eight films were given a final rating of "Good"; twelve were "Fair"; and twenty-three were marked definitely "Poor." Although this is slender data on which to declare the general inferiority of "industrial" materials, it must be remembered that the "industrial" films evaluated had been carefully selected originally from the whole field of available subjects. The evidence is certainly not in favor of existing "industrial" films when judged in terms of the standards developed for the present study.

Sound versus Silent Films

Comparisons of final ratings on sound and silent films were made more from a passing interest than from any desire or intention to settle the controversy concerning the relative merits of each. The investigation revealed that 64 per cent of the sound films were marked "Excellent"; 26 per cent were marked "Good"; and 10 per cent were "Fair" and "Poor." Forty-four per cent of the silent films received ratings of "Excellent"; 32 per cent were "Good"; and 24 per cent were "Fair" and "Poor." The conclusion cannot be drawn, of course, that the sound films are intrinsically better for teaching purposes than are silent films; however, the study did reveal a definite teacher opinion that the sound film, on the whole, had been made better for teaching purposes.

More significant than this comparison was the general suggestion that many films could be improved by the addition of important sound elements such as the characteristic noises of the market place, street scenes and industry, the languages and music of the peoples, the roar of the ocean, the noise of wind and rain, the calls of birds and animal sounds, and the spoken dialogue for all dramatic films. A critical examination of subject matter areas is needed to determine those topics in which sound is an important factor.

Recommendations for Further Evaluation

The present evaluation study is described with the sincere hope that it may contribute to a continued program of coöperative evaluation. In the end, all films offered for school use should be subjected to a rigorous selective process. The results and complete recommendations concerning usefulness at different grade levels and in different subjects should be made available to educators with the endorsement of some national accrediting agency. The evaluation standards should be frequently refined and improved. Under these conditions the difficulties resulting from a lack of reliable information about films will be obviated, and educators will begin to make some real progress in the systematic use of teaching films.

ADMINISTRATIVE TECHNIQUES FOR EFFECTIVE SCHOOL USE OF VISUAL MATERIALS

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The use of visual materials in classrooms involves many administrative problems. Mr. Ramseyer outlines the practical difficulties commonly met and the ways in which such obstacles are overcome.

ARE there techniques of administration which apply especially to the visual field? What problems are encountered in this area which are not met in other phases of educational administration? Perhaps some clues can be secured from the questions which school men ask. We constantly hear such questions as the following coming from men in the field.

"How can we be sure that we get the right kind of visual materials?"

"I am going to buy a projector, what kind would you recommend?"

"We have a slide projector, but teachers seldom use it. How can I get them to use it when they should?"

"My teachers are not getting as much out of the use of visual materials as they should. How can I get them to use these aids better?"

To answer such questions one must draw material from the entire field of visual education. Let us see how the administrator can best use this information in the solution of his problems.

I was in a school not so long ago where everything was working with machine-like precision. Materials circulated on time, ordering of films was carefully systematized. Yet it seemed to me that maximum results were not being secured. It was difficult to break through the routine to care for special needs. Teachers were not actively interested in the problems of the school. They seemed to feel that they were only cogs in a machine. Here, as is too often the case, administration sacrificed initiative and growth for smooth working machinery and businesslike efficiency. This does not imply that slip-shod methods will be countenanced. Quite on the contrary, we cannot use these materials to the best advantage nor promote the maximum growth of the staff without efficiency of administration. Yet there is danger that the mere circulation of materials on time, a systematized plan for ordering supplies, and the like, will be taken as a guarantee of administrative efficiency, even though the red tape involved discourages initiative and stands in the way of reaching our major educational goals.

The administration of visual aids should be essentially a coöperative enterprise. This does not mean that there will not be specialized duties. In fact, in every school system some one should bear the responsibility for the visual program. In the smaller schools this may be the superintendent, in slightly larger systems it may be a part of the duty of some teacher, while in the large cities it will require the full time of someone espe-

cially trained for the task. However, the one in charge must, at all points, take into consideration the opinions and desires of others, he must keep in mind the general objectives of the educational program, and he must assume the rôle of leader rather than that of dictator.

In no part of the administrative program is this coöperative approach more needed than in the selection of suitable materials. No one person can select materials wisely for all subjects and all grades. Yet you and I know administrators who order films, slides, and the like without consulting other members of the school staff. Definite criteria, which each type of material should meet, should be set up coöperatively. These can be worked out by the staff, acting through committees, with the administrator, the coördinator and leader. Suggested criteria can be found in the visual education literature which will serve as a starting point for the committees. There is much worthless visual material on the market and aids must be selected with care and with the needs of the pupils in mind if they are to make their maximum contribution to education.

Another coöperative task is that of coördinating the aids with the curriculum. Too often we use these materials, especially films, as things entirely separate from other classroom activities. Too often children of various grades are put together into special rooms to see a film which has no relation to the work which they are doing, a film for which they have had no preparation and which will not be mentioned again after the showing. We cannot expect to get results from visual aids until they become an integral part of our school procedures. The administrator should assume the lead in a coöperative attempt to find materials which are suitable for the various topics and units.

Where can visual materials be secured? Excellent and useful collections of pictures can be made at small cost. Other aids such as still films and stereoscopes can be purchased at a reasonable price. There is an obvious advantage in owning one's own films and slides. If they are owned, then they are available whenever the class is in such a condition that it seems that their use will be educationally valuable. Renting from an outside agency makes this fitting of present need to availability of materials extremely difficult. Unfortunately films are still quite high in price. Small schools will of necessity rent nearly all of their films, larger systems can afford to own those most frequently used, while the large city systems should own many of their own films.

One of the most frequent questions asked by administrators is concerned with the type of projector to buy. No very definite answer can be given to such questions. The selection of equipment is an expert job for which the administrator is responsible. He should not buy until he has thoroughly investigated machines on the market and tested them under the conditions under which they will be used. In making selections he should consider the ease of operation of the projector, quality of the picture produced, the ease with which mirrors and lenses can be cleaned and bulbs replaced, the durability of the machine, and the reliability of the company which makes it.

One must not forget that good screens are essential. Too many people pay good money for a projector, then wonder why they don't get good pictures when they project them on a thin sheet or a dirty wall. A screen should be secured which is adapted to the particular use to which it is to be put. For instance, a beaded screen may be the best investment for a narrow room, but a white mat screen would serve better in a wide classroom.

A centralized workshop will be found of advantage. Here many of the aids needed can be made, such as exhibits, models, charts, and lantern slides. Motion picture films can be regularly inspected and repaired. Projectors can be oiled, cleaned, and at least the minor repairs and adjustments cared for.

Why do we hear so often that teachers do not use the aids which the school provides? One reason is that they are not stored and handled in such a way as to be easily available to teachers. Many still pictures are reposing peacefully in some drawer, never to be disturbed until some one mounts and catalogs them so that they can be used effectively. Sets of slides are gathering dust on some out of the way shelf because the projector is too hard to get or because the teachers don't really know what slides are there anyway. Teachers will not use these materials unless they feel that the benefit to be derived is greater than the task involved in getting the materials ready for use.

The above suggests that all materials should be cataloged and conveniently filed, that teachers should be informed of what materials are available, and that ways of ordering materials should be systematized. Every teacher should know exactly how she can obtain the slides, still pictures, films, projectors, exhibits, and the like at the time that she wants them.

I was talking to a teacher not long ago who wanted to use movies in her classes, but she said that she always had to hunt up the projector, extension cord, and screen and go to a lot of trouble to darken the room and that she did not feel that the movies were worth all that trouble. Even then someone else might be using the equipment when she had planned to use it. Any teacher should be able to reserve the projection equipment for a specific time and feel sure that she can count on having it. This may be done by the simple procedure of placing a suitable schedule in the office where proper reservations can be made. Then pupils or school employees, who have been trained for the work, will see that the equipment is taken to the proper room and set up for use in time for the class meeting. They will be responsible for returning the room and projector to their normal condition after the period is over. If the administrator in the school mentioned above had used some such simple procedure, his equipment would have been used much more frequently.

But mere frequency of use is no guarantee of educational effectiveness. Teachers must know how to use the aids properly. They should know when to use them and what type is best suited to a particular situation. For instance, there is no doubt that motion pictures are often used to show a succession of still objects which could be done better by the use of slides. Certainly the ordinary photograph and the stereograph should be used much more frequently than at

present. Selection of the best type of aid is important. Not only should teachers know what type of aid to use, but also at what point in the unit it can be used most advantageously.

It is the duty of the administrator to help correct the errors which teachers make in the use of visual aids. For instance, in using slides, many teachers use a large number in a single class period, going through them very rapidly. In most instances pupils would get much more from a few carefully selected slides, shown with greater deliberation and more discussion. In using films, teachers often use them without previewing them. Teachers complain that they have no opportunity to see films before using them, since no place is provided for them to do the previewing and the projection equipment is not made available to them. The administrator should encourage this previewing of films and see that facilities are provided to make it possible.

The major companies producing educational films provide teacher guides to go with them. They can be purchased at a nominal charge. These should be bought for films which are used frequently, and placed in the professional library for the use of teachers. Then if the rental film does not arrive until shortly before it is to be used, the teacher can find the content of the film from this guide and decide how best to present the material, at what place in the unit it can best be used, and what information and directions the pupils need before they can view the film intelligently.

It is surprising how many teachers cannot operate their own projection equipment. In one large class in visual instruction last summer more than two-thirds of the students, mostly experienced teachers, could not operate a silent motion picture projector. We taught these teachers how to run a sound projector. After the first lesson many of them said, "I didn't realize it would be so easy. I'm not afraid of it any more." Too many administrators and teachers feel that there is something very complicated about this equipment and that machines and films are likely to be damaged if the classroom teacher is allowed to use them. Certainly every teacher should learn to operate this projection equipment. Even though boys are regularly used as projectionists, the teacher should be able to take over the projection work at any time if it becomes necessary.

This in-service training of teachers is one of the major responsibilities of the administrator. He should not be satisfied until by individual conferences, demonstrations, faculty meetings, provision of professional reading material, work on special problems, and the like he has trained every teacher on his staff in the fundamentals necessary for the effective use of visual materials.

Is, then, the administrative aspect of visual education important? It most certainly is. It may stimulate even poor teachers to do excellent work in this field, by making excellent materials available and helping the teacher to meet and solve her problems. Or it may be of such a type that it will handicap the best teachers, discouraging their use of these aids and making the work which they do with them of only mediocre quality. It is obvious that we need more administrators who understand the techniques of the use and administration of visual aids if their use is to be effective.

IN-SERVICE TRAINING IN VISUAL INSTRUCTION

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We cannot wait for the present generation of teachers to be replaced by those who are trained in methods of using visual instruction. If these new instructional devices are to be taken advantage of now, ways and means must be developed for teaching teachers-in-service how to visualize their instruction. Mr. Reed outlines some of the steps to be taken to accomplish this important objective.

TEACHERS are much more aware of their needs for training in the use of visual aids than are those who are in a position to provide for those needs. It is true that in the past ten years a slightly increasing number of teacher-training institutions have been offering summer visual instruction courses for in-service teachers. But when one considers the more than 850,000 teachers in this country in relation to the eighty-six visual courses offered during the 1937 Summer Session he begins to realize the meagerness of the offering. When he also considers the large proportion of these teachers who were in service before the present era of visual emphasis was stimulated by photographic developments, he is inclined to be quite disturbed. And when he notes the thousands of new teachers coming "prepared to teach" each year from normal schools and teachers' colleges who have never seen a classroom motion picture and who cannot distinguish a stereograph from an opaque projector, he decides that the situation is getting no better rapidly.

There have been countless discussions, dissertations, and declamations on whether or not there is a need for special teacher training for the use of visual aids in instruction. Those who have been most convinced of the need are divided and they convene, confer, and consider whether there shall be a separate visual course or visual training as a part of other courses in the training curriculum. In the meantime you are invited to do a little observing in the field and appraise for yourself the kind of use being made of visual aids to learning. Of course you may not find inefficient and undesirable practices in using visual materials in your own community, but surely you will in nearby school districts. You will find teachers projecting lantern slides unrelated to the pupils center of interest at a rate of sixty slides per hour or faster. You will find schools renting a motion picture for a day without concern for objectives or pupil needs and routing the film through all grades from the first through the twelfth. Or worse than that, you may find an excellent classroom film being shown in the assembly period to children from all grades at once without concern for the classroom learning situation. You will find schools that boast of their film program, but rely entirely upon the film productions of the public relations and advertising departments of commercial concerns; they do not consider that the "free" film may be the most costly film educationally. You will find schools confusing and hopelessly mud-

dling visual instruction, entertainment, raising money, and motion picture appreciation in their efforts to use motion pictures in their schools. From the mechanical point of view you will find schools purchasing expensive equipment poorly suited for their needs, schools where teachers are forbidden to touch projection equipment, and others where equipment is rendered inefficient for lack of a minor repair, proper focus adjustment, or a failure to recognize that lenses and reflectors should be kept clean.

I do not mean to suggest that visual aids are thus being used ineffectively in all schools. Any good teacher can develop her own excellent techniques for using visual aids effectively. She can analyze and understand visual aids through her own experience and apply her knowledge of children and their learning to her use of these newer tools in instruction. But trial and error methods take time and teachers can be helped in their understanding of visual aids and can learn from others, ways of using them to the best advantage. Alert teachers in service want to use visual materials in teaching and they recognize their need for some special training. Additional summer school offerings will help, but such courses at best will reach directly comparatively few of all the teachers in service.

I think it must be recognized that there are many factors in the production, distribution, administration, and use of visual aids that relate to teacher training. The method of assembling and cataloging of visual aids in state or local centers can promote most judicious use of visual aids or can result in unintelligent use of the materials in the classroom. A box of lantern slides assembled in sets of fifty to seventy-five slides tends to bring about unwise use. But small sets of ten to twenty-five slides closely related to specific units and objectives can be a force in teacher training for best use of the slides. Catalog listings that take into consideration state and local syllabi and grade levels are likely to bring about much more intelligent use than catalogs that classify in alphabetical or Dewey decimal system. It would seem then that those in charge of visual aid distributing centers must know as much about children's learning and teaching techniques as they do about photographic procedures and projection techniques. They have a definite responsibility in teacher training whether they recognize it or not.

Within any school system there is a responsibility for teacher training in visual instruction that rests with all who are responsible for instruction. Responsibility cannot simply be passed on to a visual director or supervisor because visual instruction is not something apart from other instruction. (Indeed, I prefer not to use the term visual instruction. I use rather the terms effective and ineffective instruction, recognizing the essential importance of visual aids in effective instruction.) The principal, the grade supervisor, the subject matter supervisor, the director, and the superintendent cannot escape their responsibility for effective instruction. The visual specialist can assist all by supplementing and coördinating their activities as these relate to the supervision and administration of instruction involving the use of visual aids.

In-service training in visual instruction must be more then than offering a teacher the opportunity to "take a course" or urging her to take one. Best in-service training involves all the techniques and methods of effective administration and supervision. Attention should be given to the use of visual aids in teacher meetings, committee meetings, conferences, and consultations. Opportunities for teacher learning should be presented through printed words that are available in books, in magazines, or through specially prepared printed bulletins and mimeographed helps that are planned to fit local needs. Actual demonstrations of new visual aids, equipment, and teaching procedures might well be a part of the in-service training program.

All of these ways for assisting teachers in using visual aids have been utilized in varying degrees in developing a well-rounded visual program for the Rochester public schools. To review and consider the effectiveness of that visual program and at the same time to offer special training opportunities for teachers, *A Study Committee on Visual Aids* was organized in September, 1937. In the preliminary bulletin announcing this proposal, Superintendent James M. Spinning wrote:

"I know that our teachers have plenty to do and that except for something of real value in their work they ought not to give up a Saturday morning. I believe this is an opportunity which justifies just that.

"In the development of the visual education program for the Rochester schools the major emphasis has been upon making visual aids readily available and upon providing and maintaining adequate facilities. It is realized that during this period of development teachers, principals, supervisors, and directors have given thoughtful consideration to the problems of how these materials can be used most effectively in the learning process. The plan for a *Study Committee on Visual Aids* has evolved from the thought that possibly a selected group of elementary teachers might be interested in thinking through problems related to the use of visual aids in the classroom. The principal purposes and approach to this study might be stated as follows:

"I. To consider how available visual aids can be used most efficiently and effectively for instruction in Rochester schools.
   A. To acquire a basic understanding of the nature of visual aids and their place in the learning process.
   B. To analyze critically the visual aids resources of the community.
   C. To evaluate procedures being used in Rochester in administering and teaching with available visual aids.

II. To consider and develop ways and means to assist all teachers in making best use of visual aids."

The response to this announcement clearly showed the recognition of a need on the part of teachers. The size of the group had to be limited. Forty-two teachers were registered. Attendance of course was voluntary, but for the nine Saturday morning meetings the average attendance was thirty-nine. The program was a flexible one and plans unhampered by limitations of a rigid course or time, evolved from week to week. Felt needs of the group dictated the program and every effort was made to permit free discussion so that there might be an exchange of experience between

teachers. One meeting lasted only forty-five minutes while some others consumed two hours.

Greatest interest seemed to center questions of actual techniques in using visual aids in the classroom—not only the mechanical techniques but more particularly the pedagogical techniques. Essential to the study of techniques is an understanding of what visual aids are, the common and different characteristics of the various visual aids, and their advantages and limitations. Consideration of these points ran through all of the discussions and demonstrations. At one of the meetings all of the available visual aids related to one unit on Mexico were assembled. From the Visual Department were brought lantern slides and a motion picture; and from the Extension Division of the Museum were brought all of the pictures, models, and specimens related to Mexico that were available for circulation to the schools. From one school was brought the collection of flat pictures on Mexico that had been assembled in its picture file. All this presented an unusual opportunity for teachers to see all of the available material related to one subject and to discuss the place, value, and techniques in using these materials in the classroom. One important generalization that came from the group at this meeting after a free interchange of ideas was that there seemed to be no one best way for using any visual aid. The best techniques depend upon the teacher, the pupils, the objectives, and the conditions of the particular learning situation.

Another meeting was devoted to a projection equipment clinic when opportunity was offered for consideration of equipment problems. Seven different models of projectors in use in the schools were brought to the meeting for demonstration, personal instruction, and discussion of maintenance and operating techniques.

For reference and reading a copy of Hoban's *Visualizing the Curriculum*[1] was made available to each school represented on the committee. More than twenty other books on visual aids and back numbers of *The Educational Screen* were circulated among teachers in the group.

There was evidence that many of the teachers were reporting regularly to their principals and the other teachers in their schools on the progress of the committee. This was one way in which the thinking of the group was spread to a larger group. However, much more important in developing the in-service training program to benefit all teachers was the smaller committee which was organized following the nine meetings of the larger committee. Twelve teachers who had shown most interest in the study and who were known to be superior classroom teachers were selected and invited to be members of a smaller visual aids committee to serve in an advisory capacity to the Visual Department. This phase of the program is now being developed. It is planned that this smaller group will more specifically attempt to evaluate all administrative procedures of the Visual Department. They will dictate the best ways and means to assist all teach-

1 Hoban, Charles F., Hoban, Charles F., Jr., and Zisman, Prof. S. B., "Visualizing the Curriculum," 1937. The Cordon Company, 225 Lafayette Street, New York City.

ers in making best use of visual aids. The advantage of thus working closely with classroom teachers in developing training methods is obvious. They will suggest, develop, and approve all printed bulletins and printed teacher helps that are prepared. They will also help in the selection of new materials so that such acquisitions will be purchased to fill needs that are greatest as determined by classroom teachers. The desirability of additional short courses in the use of visual aids for teachers in service will be determined by this "steering committee."

Any in-service training program in visual instruction must be wide in scope and a continuing program. All of the forces that are influencing teachers' knowledge and attitudes in their teaching must be considered and coördinated so that their collective force can serve to bring about the most intelligent use of visual aids in classroom instruction. Experience seems to show that teachers do recognize their own needs and that an in-service training program in visual instruction functions best when it is planned so that it first permits teachers to let their needs be known, and second, when it is aimed to fill those needs.

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VISUAL INSTRUCTION IN ADULT EDUCATION

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Learning does not stop with formal schooling. It continues throughout life. The extent to which the motion picture is being used by organizations which are concerned with adult education is clearly presented by Miss Gibbony. The motion picture has a great contribution to make in molding the lives of those beyond school age.

TEN years ago Dorothy Canfield Fisher wrote what has come to be one of the best-known books in the field of adult education, *Why Stop Learning?* The answer to that question is, of course, that no one ever does stop learning. It is the quality or level of the learning that is educationally important. In a discussion of the place of visual instruction in adult education, a similar question might be asked: Why stop looking? And the answer is the same: no one ever does, but the quality of the visual material and the effectiveness of its presentation are the factors which justify its use.

Adult education has been defined and redefined, divided and subdivided. More recently, however, there has arisen a realization that it need not be classified as "cultural," vocational, and so forth. One general definition describes adult education as simply "the process of learning, on the initiative of the individual, seriously and consecutively undertaken as a supplement to some primary occupation."[1] In this statement are set forth some of the characteristics of adult education which must of necessity condition the nature of the material and the methods utilized.

In the first place, it is voluntary, "undertaken on the initiative of the individual." No one is insisting that this person attend school. Instead of an external pressure there is an inner compulsion. Although this may prove to be a very keen incentive, it must be recognized that interest is the thread which is holding the student to the adult education situation.

A second characteristic of adult education is that it is a "supplement to some primary occupation." This introduces the factor of fatigue, physical or mental or both, and increases the importance of really interesting the student. The limited time which the individual can devote to adult education is usually time which would otherwise be spent in some type of recreational activity, and for that reason, the recreational aspect of adult education cannot be disregarded.

A third factor, not necessarily inferred in the above definition of adult education, is that groups in this field are likely to be somewhat diversified. There is great variation in age, vocational interest, educational and general background, and previous information. The adult educator is therefore faced with the problem of interesting everyone, at the same time keeping his material simple enough for those of meager background and sufficiently challenging to those who have had previous experience. Fur-

1 Keppel, F. P., "Education for Adults and Other Essays," page 280.

thermore, the adult will recognize more quickly than will the average school child, any lack of efficiency in instruction. Since he is voluntarily devoting his time, he will also feel that he has been personally defrauded if this time seems to him to be wasted.

What, then, are the implications for visual instruction in this type of situation? It has been demonstrated in a number of experiments that visual materials, and especially educational films, have been effective in stimulating interest. They can, by expanding the area of concrete experience, compensate for the limitations of language which may otherwise prove a hindrance to the development of interest. The motion picture does not require of the student an extensive background or great ability to verbalize. Experiments such as those of Knowlton and Tilton[2] have shown that pupils are stimulated by films to do more outside reading, to discuss more freely and intelligently in class, to integrate experiences more readily. In a sense, film use "informalizes" an educational situation through its ability to arouse discussion and to motivate further investigation of the problems presented.

Not only does the educational film stimulate interest, but it can effectively provide for individual differences. It has a wider range of content than has the ordinary textbook and can offer multiple possibilities for learning. As has been pointed out by Dr. Edgar Dale, "a motion picture, unlike written accounts, has literally thousands of facts contained in it—the architecture of the house, the people's clothing, the scenery, tools and equipment."[3] This range and flexibility of the film make it adjustable to individual differences both in background and in interest. A student can enlarge a meager background without necessarily going into the detail, also present in the film, which may interest the more intellectually mature student.

It has been found that the more heterogeneous the group, the greater the need for concrete rather than abstract and symbolic materials, in order to obtain greater uniformity of understanding and comprehension. Hollingworth, in his discussion of the psychology of the audience,[4] has formulated a scale of visual-verbal symbolism, ranging from first-hand concrete experiences to highly technical symbolic presentation. Upon this scale the motion picture is preceded only by first-hand experiences and by the "acting out" or dramatizing of events or situations. Verbal description, on the other hand, ranks sixth in concreteness.

The effectiveness of the educational film is indicated by its ability to stimulate interest and to provide for individual differences. Additional evidence of its effectiveness is seen in its ability to present certain types of material more vividly than is possible through the use of verbal symbols. Further, as is stated by Lancelot Hogben, "It can explain many things which many people can never understand at all, if they have to rely on the printed word."

2 Knowlton, Daniel C., and Tilton, J. Warren, "Motion Pictures in History Teaching."
3 Dale, Edgar, "New Understanding Through Visual Aids," reprinted from "Education," October, 1937, page 4.
4 Hollingworth, H. L., "Psychology of the Audience," page 78.

This special contribution of the film is most evident in those areas where motion is an integral part of the situation being examined. In presenting a continuous process, it is able to show relationships of parts to the whole, to present successive stages of an activity, to show in continuity certain cause-and-effect relationships and the interaction of characters and events with each other, to contribute to the development of generalizations and an understanding of the relationships existing. In presenting observable action, the film approaches the real-life situation, since activity is a part of the first-hand experience. In the field of unobservable action, there are such devices as animation, slow-motion photography, time-lapse photography, micro-photography and miniature photography. The film excels in the depiction of action which is too rapid, too slow, too obscure, or too minute to be observed by the unaided human eye.

The little that has been written about film use in adult education—and the bibliography in this field is still small — has tended to discuss classroom situations. There is, however, the vast field of informal adult education in which films are already proving their worth. Adult education of course shares the objectives of general education: the acquisition by the individual of information, skills, and attitudes, in order that he may understand and adapt himself to a complex and changing society. Each adult, too, has a number of rôles in this society; as producer, consumer, citizen, parent. It has been recognized that theatrical films are a powerful educational force in the disseminating of information or misinformation and in the changing or reinforcing of attitudes. Furthermore, documentary films which are non-theatrical and are intended for general education are already being widely used in England. In this country, "The Plow That Broke the Plains," a vivid presentation of the causes and results of soil erosion in the "Dust Bowl" area of the United States, has since its release by the Resettlement Administration, drawn a monthly audience of 750,000 persons, not including school showings. Its sister film, "The River," showing the effects of flood, deforestation, and soil erosion in the Mississippi basin, has just been released and is being received enthusiastically. During the year ending June 30, 1935, approximately five million persons saw films produced by the United States Bureau of Mines. During the fiscal year ending June 30, 1937, four million persons saw films produced by the United States Department of the Interior, dealing with such topics as the conservation and destruction of natural resources. Here we see the educational film functioning as a very real instrument in adult education on a large scale.

Another informal area of adult education is found in the educational programs carried on by a number of national organizations, such as the Y. M. C. A., the Y. W. C. A., the National Recreation Association, the National Tuberculosis Association, and by large museums such as the Metropolitan Museum of Art and the American Museum of Natural History. There has been little unified information about the film activities of these groups, however. In an effort to obtain some data in this field, an

inquiry was sent in the spring of 1937 to some 75 national organizations who were carrying on education programs, usually with adults. Sixty-three of these organizations, or over 80 per cent, replied to the following questions:

1. Do you now make use of motion pictures in carrying on your educational work? If so, what is the nature and extent of this use? If possible, append the names of the motion pictures used.
2. Can you put me in touch with members or chapters of your organization in Ohio who are making use of films in their educational work?
3. If you do not make such use, do you contemplate doing so? In what ways might motion pictures serve the objectives of your organization?

Although the replies did not represent clear-cut answers to the above questions, certain broad generalizations emerged. Thirty-six of the organizations, or 57 per cent, were using films in their educational programs, although this use varied tremendously among them. The most frequent reason advanced for failure to use films was expense, usually of production. Many of these groups were carrying on production activities, and others were planning to produce films. Some maintained film libraries for the use of local branches of the national organization. One group stated that it produced and distributed films, and felt that they were very effective, but added solemnly: "This type of visual material is used as a part of the curriculum. In other words, the entertainment value is fully removed."

Some examples of the types of activities carried on by these groups may be of interest:

The American Library Association has sponsored a two-reel silent film, "Found in a Book," which was shown during 1936 to approximately 50,000 young people as a means of introducing them to school or college libraries. The Association is planning to produce a film on "the young worker and the library" and two or three P. T. A. films, introducing the library to business men. Another will be made which brings in a social worker and an unemployed family and shows what the library might mean to this group.

The American Museum of Natural History has produced many films dealing with its field expeditions. Every Saturday afternoon it presents a film showing originally designed for children and their parents, but now attended by the general public. It also maintains a library from which films may be withdrawn for use in adult evening schools, public schools, churches, C. C. C. camps, clubs, and so forth. The Metropolitan Museum of Art has also produced a number of films dealing with various phases and periods of art. These are available to groups at a nominal fee, and are distributed free to public schools within New York City.

The Kiwanis International uses films for three purposes (1) for educational and entertainment club meeting programs, (2) in presenting vocational guidance information to young people, (3) as a means of educating the members of Kiwanis International regarding the possibilities of work with under-privileged children.

The National Association for the Advancement of Colored People made in 1934 a film titled "A Study of Educational Inequalities in South Carolina," exposing race discrimination in

rural schools. This organization would like to use more films since it feels that "motion pictures humanize and dramatize the discriminations which Negroes suffer much more effectively than any corresponding amount of speech could do, and films would be serviceable in working for equal rights both in showing the evil results of discrimination and, constructively, the advancement of living and social standards when discrimination is removed."

The National Recreation Association uses films widely in public recreation.

The National Tuberculosis Association in ten months has sold 400 copies of its film "Behind the Shadows," and is planning to produce another film.

The National Kindergarten Association, while not able to finance films at the present time, hopes to do so in the future and writes, "Good motion pictures of kindergarten procedure would be helpful in creating interest in the extension of kindergarten education."

These are only a few examples of the sort of film use that is being carried on by national organizations, but they are significant of the interest which has developed regarding such use.

Where adult education classes are using the facilities of the public schools, the increasing availability of motion picture equipment will mean additional use with adults as well as with children. In the more informal areas of adult education, there is already widespread use of and even more widespread interest in the educational film. In *Why Stop Learning?* Mrs. Fisher predicted an "unthinkable transformation" in the use of motion pictures in certain phases of adult education in a generation or two, "or even five." A decade has changed the picture a great deal, but there are possibilities for film use which should not have to wait for five generations before they are realized. Major needs at the present time are for better methods of film distribution, a central clearing-house of information about available films, carefully planned production programs for adult education use, and certainly a more extensive body of literature on what is now being done with films in adult education.

A TEACHING EXPERIMENT WITH VISUAL AIDS

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It is encouraging when teachers take the time and energy to test their instructional techniques. Mr. Park and Mrs. Stephenson describe their experience with classes taught with and without visual aids.

THE size and completeness of a visual education library does not insure the correct use of the material. Continuous study and experimentation on the part of the teachers is necessary to the successful use of the slides, films, etc. found in the library. It was with the realization of this fact that the writers performed the experiment reported in the following paragraphs.

The purpose of the experiment. When performing an experiment one must have certain purposes in mind but yet be cautious of doing things that may lead to results that are misleading. In this experiment the objectives were two-fold; (a) to correlate more closely the work of the social studies and the language arts departments, and (b) to find the value of visual aids in giving a more complete knowledge and understanding of material covered in a particular unit.

Planning the experiment. A 7B group was selected and a division was made on the following basis; (a) an average of the student's past grades in social studies, (b) an estimate of each pupil's ability, (c) a test (Test I), and (d) the I. Q. of each pupil. Test I was based on the unit to be taught, in connection with the social studies work. This unit was entitled "How the Colonies Became the United States." The test consisted of fifty questions, including blanks to be filled, matching of events and dates, underlining the correct word, completing sentences, et cetera. This same test was given at the end of the experiment and was labeled Test IA.

A study of the French and Indian War in the social studies classroom and of Colonial Life in the language arts class furnished an adequate background for the unit, "How the Colonies Became the United States."

The techniques employed in the experiment. The class was divided into two groups of as nearly equal ability as possible. Each group contained fifteen pupils at the beginning. However, one of the members of the group taught without aids withdrew from school.

An attempt was made to give each group an equal amount of time. One group was taught with the use of such visual aids as films, slides, and flat pictures. Both groups had access to the same reference books, maps, globes and library books. The members of the group taught without the abovementioned visual aids were allowed to use a flat picture if they learned of its existence by the use of the card index that accompanied the filing cabinet. The group taught without aids did not hold a class discussion on the flat pictures. The basic difference in instruction was that one group was making use of slides, films, and flat pictures by discussion, while the other

group had no access whatsoever to films and slides, and only to the flat pictures as described above.

All films and slides shown during the experiment were shown by the social studies teacher, even though they were a part of the language arts work. This could be done, as the social studies period followed the language arts period, and thus, they could be shown without any "time lapse." The showing of all slides, flat pictures, and films by one teacher minimized teacher difference.

The group taught without aids remained in the language arts room while those taught with aids were moved to the social studies room at the end of the language arts period. This definitely segregated the two groups. The teachers moved from group to group to save time and trouble in shifting classes to different rooms. The plan also made possible the teaching of all social studies work by the social studies teacher and all language arts work by the language arts teacher. The procedure followed the school schedule. The school program was not disturbed by the experiment. All work and planning was conducted in a natural school set-up.

Each group was provided with individual study guides. The experiment ran for about fifteen days, with ninety minutes of working time each day. This amounted to forty-five minutes for language arts work and forty-five minutes of social studies work per day.

The job tests. During the course of the experiment four job tests were given. These job tests were short ten-question tests to check the student's progress. These tests were based on the work done in the social studies class.

In tabulating the results of these tests the group taught with the aids seemed to have an advantage over the group taught without the use of the visual aids. The group taught with aids ranged from .64 of a question per pupil correct to 4.13 questions per pupil correct above the group taught without aids. This fact is pointed out in Table I. The probable error has not been computed due to the small number of cases involved.

TABLE I

A Table Showing the Superiority of the Group Taught with Visual Aids on Four Job Tests

Test	Class Taught With Aids	Class Taught Without Aids	Difference
Job Test I	8.2*	4.07	4.13
Job Test II	7.93	6.86	1.07
Job Test III	8.00	7.36	.64
Job Test IV	7.79	6.62	1.17

A comparison of Test I and Test IA. A comparison of the data in Table II will show how visual aids tend to help children in their social studies. Test I, the fifty question test given at the beginning of the experiment, showed a difference of .22 between the two groups at the beginning of the experiment. This difference was in favor of the group to be taught with the use of the visual aids. At the end of the unit the same test was given (Test IA) and the difference was 6.62. This difference in the average number of questions answered

* The figures used in the table above represent the number of questions answered correctly per pupil.

correctly per pupil was again in favor of the group that had been taught with the use of the visual aids.

TABLE II

A Comparison of the Number of Questions Answered Correctly on Test I and Test IA by the Two Groups

Test	Class Taught With Aids	Class Taught Without Aids	Difference
Test I	10.93	10.71	.22
Test IA	38.33	31.71	6.62

The value of correlation. A second objective of this experiment was an attempt to find if direct correlation of social studies material and the material of the language arts department was worthwhile. Test I and Test IA contained seventeen questions that were developed in both the language arts and the social studies work. The remaining thirty-three questions involved facts that were dealt with only in connection with the social studies work. The pupils showed a greater improvement on the questions that tested work that had been directly correlated. See Table III.

TABLE III

A Table Showing the Results of Correlation

Questions	Number of Questions	Average Number of Questions missed per Pupil on Test I	Average Number of Questions missed per pupil on Test IA
Directly correlated	17	13.66	3.21
Not correlated	33	25.27	11.83

In conclusion it may be said that the results of the experiment has lead the writers to some observations that they believe to be significant. This experiment indicates that visual aids are worthwhile and useful in the teaching of social studies. Also, it would seem that when language arts, literature and social studies material are closely correlated there is a better understanding and appreciation of literature and social studies material.

HOW TO MAKE LANTERN SLIDES

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Visual instruction is not synonymous with the motion picture. Charts, diagrams, models, maps, globes, stereographs, and lantern slides all furnish valuable visual experience in the classroom. Major Price, a teacher of long experience, has recorded for other teachers the benefit of his experience in making lantern slides inexpensively.

IN spite of the fact that colored lantern slides were made and used long before the invention of photography, their adaptation to modern visual instruction needs is surprisingly limited. The magic lantern, which fascinated us as children, has given place to the toy motion picture projector. The quaint German pictures, thrown on a carefully ironed sheet through the feeble efforts of a smoky kerosene lamp, have faded into cherished memories of the past.

Visual instruction today looks on these ancient masterpieces (if it looks at all) as a lost art. A few schools in different parts of the country are making colored lantern slides, but their influence has not yet been felt generally and this virgin field is wide open to any one who will take the trouble to enter it.

It is true that the old magic lantern slides were small. In some cases the pictures were not more than one inch in diameter, and could be executed only by an experienced miniature painter. It was also necessary to prepare the glass with gelatine or varnish in order to make the paint stick. Less expensive slides were made with semi-transparent transfers or dicalcomanias.

In our lantern slide making today, however, we are not confronted by any of these obstacles. We have a much larger surface to work upon and brilliant transparent colors which will readily adhere to the glass or other materials without any special preparation of the surface.

The modern projector with its powerful incandescent lamp is easily operated by pupils or teachers and is capable of producing a clear screen image four or five feet long in an undarkened room, if there is no direct sunlight on the screen.

The materials for making colored lantern slides are inexpensive and easily obtainable and the technique is readily mastered by children in the fifth and sixth grades. Older children and teachers can obviously turn out more elaborate and better finished work.

The greatest value in hand-made slides is the opportunity which is given the student for self expression and a personal identification with the subjects treated, both of which are lacking in the use of ready-made materials in the preparation of which the child has had no part.

The Materials

There are two kinds of surfaces upon which to work:

Glass—either clear or etched.

Lumarith—either clear or frosted.

Lantern slide glass should be thinner than window glass because thin glass is less apt to crack under heat

from the lantern and because the completed slide should be thin enough to fit easily in the slide holder.

Clear glass is used for two purposes:

a. As a working surface on which to draw or paint the design.

b. As a protecting cover over the design.

Etched glass is used for making pencil or crayon slides.

Ordinary frosted or "ground" glass as purchased in a hardware store will not do. The coarse grain shows on the screen and so much of the light is stopped that the screen image is dull and uninteresting. Excellent fine grain etched glass is sold by the Keystone View Company, Meadville, Pennsylvania.

Lumarith has several advantages over glass for certain purposes.

a. Being only about one fifth as thick as glass, the upper surface lies much closer to the paper when used for tracing, thus eliminating inaccuracies due to "paralax."

b. It is unbreakable.

c. It will take india ink which is difficult to use on glass.

d. It is less expensive (good etched glass costs seven or eight times as much). Etched glass, however, is less expensive for temporary slides because it may be washed off and used over again while lumarith cannot.

Lumarith is made by the Celluloid Corporation, 10 East 40th Street, New York, New York.

Opaque Black Ink (for outlines and detail) — This must be a perfectly opaque ink which will work easily in a fine lettering pen. Scarborite Opaque Black is recommended, because it will work equally well on glass, lumarith, cellophane, paper, or practically any other surface. It is really opaque and will not flake or chip off.

Higgins waterproof india ink may, with care, be used on lumarith, but is difficult and uncertain on glass.

Colors—Liquid colors or paints to be used on glass or lumarith must have the following properties:

a. Good transparency.
b. Brilliant color.
c. Must adhere to the surface.
d. Easily used.
e. Quick drying.
f. Easily erased.
g. Must not fade or change color under the heat and light of the projector.

The colors recommended for all colored lantern slide work are made by Scarborite Colors, Scarborough-on-Hudson, New York, because they fulfill all of these qualifications.

Colored crayons can be used only on etched glass or frosted lumarith. These materials, however, stop a large proportion of the projection light and must be projected in a room at least partially darkened.

Cellophane (Used to produce all-over colored backgrounds and for typed slides)—Have on hand a few pieces of clear, pale blue, amber, and other colors as desired.

Binding Tape (For masking and for binding slides where a cover glass is used)—½" cellulose tape in several colors is made by Minnesota Mining and Manufacturing Company, 155 Sixth Avenue, New York, New York.

Carbon Paper (For making typed slides on cellophane)—Special: Sold by Keystone View Company and Radio Mat Slide Company, 1819 Broadway, New York, New York.

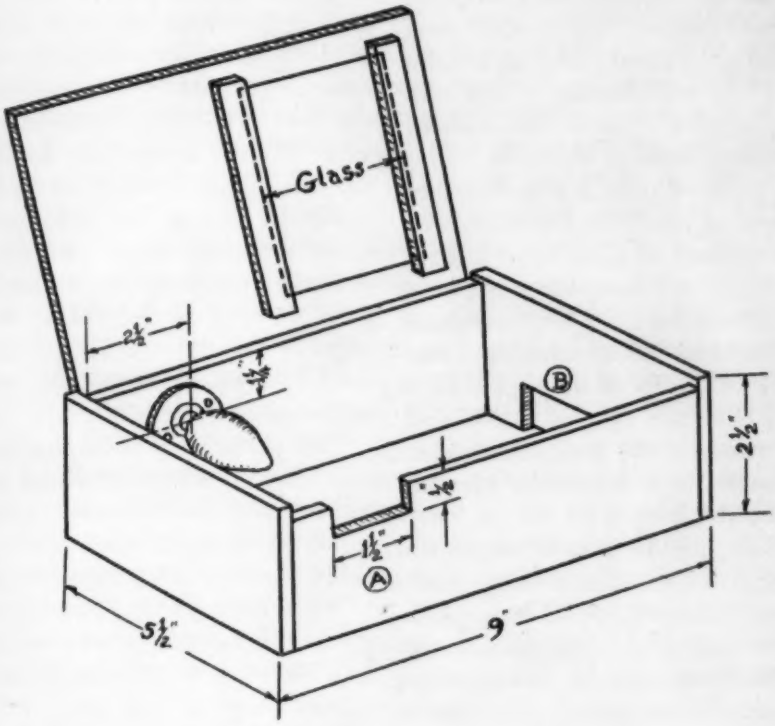
Brushes (For liquid colors)—Any fairly good watercolor brushes will do. The sizes recommended are Nos. 2, 3, and 4. If much work is to be done,

it is advisable to have eight No. 3 brushes, one for each color and black. This will save the trouble of cleaning brushes for each color and will avoid the possibility of errors, if the brush is not perfectly clean.

Cleaning Rags (For cleaning brushes)—Have at hand two or three pieces of cheese cloth or soft rags for cleaning brushes and for cleaning off glass slides that are to be used over again.

Pencils—Two grades of pencils are used; No. 3 for drawing on etched glass and 4B or No. 1 for frosted lumarith. A slight variation from these grades in either direction is permissible; but it will be found with a little experimenting that too soft a pencil on etched glass will produce a ragged smudgy line and too hard a pencil on lumarith will leave no mark at all, but will smoothe out the frosted surface and show as a white line on the screen.

Light Table—Lantern slide making is facilitated by the use of some form of light table. This consists of a square of etched glass lighted from beneath. We do not know of any light table on the market as satisfactory for this purpose as one that you can easily make yourself.



Specifications are as follows: Procure a cigar box about 5½" x 9" x 2½" deep. At one end of the cover cut a rectangular hole 3¼" x 4". The exact size may be first marked by drawing around a piece of etched lantern

slide glass. The hole may be cut with a sharp knife. Make two strips of cigar box wood ½″ x 5″ and nail these under the cover in such a position that they project over the edge of the hole about ⅛″ as shown in the drawing.

Now close the cover and place a piece of etched glass in the hole, with the etched surface down. It will be supported by the projecting strips of wood underneath. On another piece of etched glass draw across each end a line ½″ in and parallel to the end. This is a guide to show the limits of the working space on the slide. This second piece of glass is placed, etched side down, on top of the first piece. The glasses are held in place by sticking a frame of ½″ cellulose tape around the edge, overlapping it on the glass about ⅛″ all around. Now open the cover and cut two holes at (A) and (B). These should be about ½″ x 1½″ and are to ventilate the box. The upper hole also serves to admit the wire attached to the lamp.

The lamp is 110 volt, 10 watt with candelabra base and fits in a small porcelain socket which is screwed to the back wall of the box. The lamp and socket may both be purchased in the 5 and 10 cents stores. The center of the socket should be 1¼″ from the top edge of the box and 2½″ from the end, as shown in the drawing. A small flexible lamp cord about 6 feet long is attached to the socket and a "cap" attached to the other end for attachment to a current outlet in the room.

If the box is not already lined with white paper, lay a sheet in the bottom to reflect the light up through the glass. When the light table is not in use the cord may be coiled inside the box. The box may also be used to hold pencils, brushes, and other materials.

Making the Slide

The standard size for the lantern slide is 3¼″ x 4″. Of this space, only 2¾″ x 3″ is available. We must allow a ½″ space at either end of the slide to be "masked off" or covered with tape as this portion will not appear on the screen, because of the shape of the slide holder and the size of the condenser lenses in the lantern. We also lose ⅛″ at top and bottom of the slide which is covered by the binding tape. All drawings then should be prepared of such a size as to be contained within a rectangle 2¾″ x 3″. The slide is always projected in the horizontal position, so be careful to keep the long edges of the slide at the top and bottom, otherwise your picture will be projected on its side.

The picture or other drawing, or even lettering should be drawn first on white paper. Here errors may be corrected or changes made much more easily than on the glass or lumarith.

When the drawing is completed the glass or lumarith is placed over it and held in place with a small piece of cellulose tape at each side.

Slides Made with Black Ink and Liquid Colors — All of the outlines and details of the drawing are traced with the Opaque Black which must be stirred thoroughly to mix the pigment that has settled to the bottom. Use a fine lettering pen and keep it moving. If the ink will not run, wipe the pen off and re-dip it.

Now place the slide on the light table and apply the colors. Do not work with a dry brush. The colors

must be kept in a liquid state until each area is covered. Small areas are easily covered, but in larger areas care must be taken to keep the color floating and move it quickly, much as in making a watercolor wash. If the color should dry before completing an area, the joining of the next application will show in the projected picture. If you wish to have brush marks show, and know how to do it, the process is much the same as with watercolor. Use less color on the brush and allow it to dry as you work.

The colors may be mixed except the Opaque Black which is of an entirely different chemical composition and will not combine with any of the colors or with the Solvent and Reducer. This difference makes it possible to paint over the black lines without dissolving them. If an error is made in coloring, it is possible to wash off all the color with Solvent and a large brush without taking off the black tracing. Small erasures may be made by scraping with a knife after the ink or color is dry. A little practice will indicate just how much color to use. If you put on too much, it will flow over the boundary line and if too little it will dry before the next brush full is applied.

To make lighter shades of color, add Reducer, which dilutes the color but does not make it thinner. If the colors become too thick from evaporation, add a small amount of Solvent. Solvent is also used for cleaning brushes and for washing color from glass.

When the liquid colors are used on etched glass or frosted lumarith, the surface becomes perfectly transparent and the colors will project with the same brilliance as when used on clear glass. The surrounding background will appear as a dull gray. Clear Reducer applied to the frosted material appears as white on the screen.

When the painting is completed stick a piece of tape along each end of the slide. This will cut off the projection of the frame of the condenser lens and the slide holder which appear out of focus on the screen and make a bad edge for your picture. If the picture is small and takes up only part of the space on the slide, it is usually better to frame it down smaller by using additional strips of tape at the ends and perhaps at top and bottom.

If the slide is made on glass, cover it with another glass and bind it around the edges with ½″ cellulose tape.

In the lower left corner stick a "thumb spot." These can be made by punching holes in gummed paper with a ¼″ paper punch. The punchings should be white or some bright color which will contrast with the background of the slide. In placing the slide in the lantern hold it with the thumb spot in the upper right corner as you stand behind the lantern. The slide is then upside down and backwards but will appear correctly on the screen.

Remember that your slide is to be magnified about twenty times and that small errors, weak lines and finger prints will show up clearly where they may have appeared of little moment on the slide itself.

If the slide is made on lumarith, it should be put between two glasses and bound. Temporary slides on glass may be left uncovered, if carefully handled.

Where an all-over colored background is desired such as blue oceans or seas in a map slide, a piece of light blue cellophane may be cut 3¼" x 4" and placed over the drawing before the cover glass is bound on. The color is so pale that it will not materially affect the other colors on the slide.

Pencil and Colored Crayon Slides

These can be made only on the frosted or etched materials and must consequently be projected in a wholly or partially darkened room for satisfactory results because of the relative opacity of the materials.

The technique employed in this type of slide is better adapted to younger children who would have trouble with the liquid colors, but it is also true that the best results can be obtained only by older children or adults. Colored crayon slides are deceptive. Many slides that appear quite effective in the making do not show up well on the screen. The pencil marks do not give sufficient contrast to the gray background and the colors are much less brilliant.

Considerable practice and frequent trial projections are necessary before creditable results may be obtained.

The preliminary procedure is given under "Making the Slide." When the drawing on paper is completed, it is traced in pencil on the etched glass or frosted lumarith and then placed on the light table for coloring. For single lines or small work the crayon must be sharply pointed and the lines gone over at least twice. For coloring larger spaces it is well to go over the space several times making the crayon strokes in a different direction each time.

Pencil erasures may be made with an art gum eraser. To clean the glass completely for re-use it is usually necessary to scrub the surface with an abrasive washing powder such as Dutch Cleanser.

The frosted lumarith cannot be cleaned off or used a second time.

The Typed Slide

The typed slide has a variety of uses and is usually superior and more easily made than the hand-lettered slide.

The typing is done on cellophane by means of a special carbon paper. The carbon paper is placed on either side of the cellophane, with the treated or carbon side nearest the cellophane. It is then placed in the typewriter, either with or without the ribbon in place and the typing done in the usual way, being careful to keep within the 2¾" x 3" space.

The most brilliant slide may be made on clear cellophane, though amber or other tinted background is less apt to cause eyestrain if a number of slides are to be used in succession.

Typed titles or notes may be added to pictorial slides by typing on 3¼" x 4" cellophane in the desired position and laying the cellophane over the drawing before binding. It is possible to do the typing directly on a frosted lumarith slide, though the letters are not so clear as on the thin cellophane.

Amber cellophane and special red carbon paper are furnished by Keystone View Company and by Radio-Mat. The Radio-Mat includes a paper mat to limit the typing space and to bind in with the finished slide.

These slides as well as others for temporary use made on cellophane or lumarith may be held in place in the

projector by means of two cover glasses bound with tape at the bottom edge only. This retainer may then be opened like a book and the slide placed between the two glasses.

Silhouette Slides

Slides may be made by cutting out figures from opaque paper and pasting them on clear glass. This technique is largely used in the primary grades and is often very effective.

Silhouette slides may also be made by pasting leaves, grasses, or other flat specimens on glass. There will be no color in the projected picture, but the black silhouette will clearly show the shape and outline.

Map Slides

One of the most useful slides is that of the outline map. This may be easily made by tracing the map outline with opaque black on clear lumarith or glass, from a map of suitable proportions in a geography or atlas. The slide may be projected not only on a screen but on the blackboard or a large sheet of paper. The outlines are then gone over with chalk or pencil respectively and when the projector is turned off there is an enlarged map on the board or paper. The size of the enlargement may be varied by placing the projector at different distances from the copy.

This procedure may be used with other than map slides where it is desired to have an enlarged drawing quickly and accurately made.

Conclusion

The hand-made lantern slide has demonstrated its value as an aid to instruction in certain schools over a period of years and it is believed that more general use of this medium has been retarded by lack of information regarding materials and technique. It is hoped, therefore, that the foregoing article may at least partially fill the existing need. The sources of materials given are those that have happened to come to the notice of the author and it is not to be assumed that similar materials may not, in some cases, be obtained locally or from other sources.

Editor's Note: The author of the above article has indicated his willingness to answer questions or supply information not covered in the article.

DEPARTMENT OF ADULT EDUCATION

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THE ADULT EDUCATION COUNCIL *of* GREATER BOSTON

JULIA SHEEHAN, Editorial Secretary, 217 State House, Boston, Massachusetts

THOUGHTS ON ADULT EDUCATION

EVA WHITING WHITE

PRESIDENT, WOMEN'S EDUCATIONAL AND INDUSTRIAL UNION, BOSTON

ON May 18 next, at the Berkeley-Carteret Hotel, Asbury Park, New Jersey, the thirteenth annual meeting of the American Association for Adult Education will be held. Those who attend are asked to be prepared to discuss the following questions: (1) For whom are we working? (2) Are we giving them what they want? (3) Who are our leaders and how are they trained? (4) What is the degree of freedom in adult education? (5) To what extent do we educate for social action? (6) Are we overemphasizing method? (7) How is adult education affected by forms of government? (8) In what directions are we moving?

It is not our purpose to attempt to answer these questions, but it is important to point out their significance to those who are participating in the adult education movement and to state that thirteen years of experimenting with forums, the use of the radio and movies, with lectures and with discussion groups should have produced a background full of rich material for the sessions.

Thirteen years is not a long period in which to gauge results, yet, considering the growth of the demand during this time and the challenge presented by many phases of life, these thirteen years have intensified the knowledge as to the desires of people and have also brought out skills of program making and of method. Clearly the adult education movement is national in importance. It stands as the culmination of nearly seventy-five years of prediction and of hope. Every type of person, every range of interest, come within its province. It is scientific in certain of its formal aspects and valuable always by virtue of its permeating influence even when groups or individuals go in different ways dominated, as they may be, by the interests of the moment, since whole spheres of thinking and of action can be swung by a chance conversation or an unexpected written thought or visual presentation.

The adult education movement, then, has two spheres, namely, that of organized effort and that which rests —organized or not—on more general bases, as represented by various ave-

nues such as the press and general community attitudes. Therefore, any attempt to analyze this field of effort takes on a wide scope. Its dominating purpose is to endeavor to assure the individual of fuller and more personal participation in his world—a purpose fundamental to the tenets of democracy, since democracy rests its strength not upon the leadership or control of a few but rather upon the intelligent action of all its members, who create their own leaders and, as they follow them, bring to accomplishment their objectives.

Way back in the fifties and sixties of the nineteenth century a group of Englishmen, among them Charles Kingsley and John Ruskin, saw that if England were to progress in such a way as to develop the maximum of human power, men must become masters of their own fate, and so the Workingmen's College was founded in the midst of a working class community in East London. This can be said to have been a pioneer in adult education.

The university students and graduates who taught were not so much concerned with literacy of speech as with depth of thinking and rested the results of their undertaking on the potential ability of those who were molded by the exigencies of their daily lives.

It is interesting to note, in reviewing the literature of this experiment, that the instructors endeavored to teach as objectively as possible with a minimum of indoctrination and to bring about the growth of ideas in terms of relationships, that is, the relation of men to their associates, to their occupations, to their surroundings, to other groups in society and to their country — principles which can still stand as guide posts.

Moreover, there were other motives which were emphasized by those pioneers, such as the necessity of getting society in general to recognize the fact that thousands were debarred from personal physical development and mental growth because of lack of leisure and the narrowness of their contacts and, also, that men must have decent living and working conditions in order to become men.

In this country Cooper Union in New York was founded in 1859, Chautauqua in 1874, and the social settlements began to gain in influence in the eighties. Lecture courses, "Lyceums" as they were called in the time of Emerson, sprang up early in American life, while Lowell Institute in Boston has a long and honorable record of having offered for many years a wide range of subject matter presented by national and international authorities.

Never, however, has adult education been as much valued as at present, and never has there been as widespread and positive an effort to reach the last man. Moreover, the movement has broadened to include not only the intellectual approach but all the arts of life as well, and it is fast being integrated as a part of the national educational procedure as a whole. Why? Because our world is complex and highly organized to a degree never before known in history and also because it is seen that the formal processes of education have proved inadequate to illumine many a need of later years. That is, the concept that school or college training can

prepare for future emergencies in a changing world where knowledge grows apace is now recognized as not true.

As to the phases beyond the intellectual field as such, many elements go to make happiness and well being. Life is not lived entirely on an economic or political level. One may well be interested in the vast increases in scientific knowledge which range from physical health to curiosity about nature and her elements. Then there are religious and ethical concepts with which one should be deeply concerned and, lastly, there is the romance of art and literature.

Further, adult education is not concerned alone with the taking in of knowledge. It offers opportunities for giving vent to the creative by action as well as by thinking—by doing, if you will. The hand, as well as the mind, should have its chance. That is why handicraft and painting and drawing and music and creative writing are included. Perhaps the Fountain of Youth will be found through the development of enthusiasm which comes from absorbing interests. A laborer may become a better worker if he has the chance to take part in action quite outside of that concerned with the skill of his trade, and a banker may become a better financier by change of responsibility.

These are reasons which account for many types of organizations which meet together to endeavor to plan the best methods of service, since the needs and desires of men and women require a different approach than do those of children. Program making, moreover, becomes that of adapting subject matter to the wishes of a group, not that of adapting the wishes of a group to what an instructor might choose for himself. The atmosphere in which teaching is undertaken should be informal and a premium should be put on the participation of every member of a class. Almost a new type of teacher needs to be developed — one who can meet the adult mind and whose grasp of that which is to be taught and manner of presentation will overcome the tendency for reticence on the part of grown people.

Further, the meeting places should be quite different as far as equipment and arrangement are concerned from the average classroom. They must be inviting and comfortable.

The ultimate as to all these matters has not been said, so there is much reason for conference and for consultation and for the exchange of experience. It is this exchange which the Adult Education Council of Greater Boston aims to bring about, so it is not too much to maintain that every agent engaged in this line of effort should join as a member and thereby both get and give, that the society may be strengthened and serve well one of the most fundamental approaches to rounded citizenship.

With the increase of leisure there comes a vision of how the adult education movement can focus in terms of the continued growth of body and mind and of how it can further that kind of coöperation which is only, in certain spheres, just being sensed—a coöperation such as, perhaps, will evolve a new mind which will be strong in itself, far seeing in relation to others, and just both in its national and international goals.

DEPARTMENT OF BOOK REVIEWS

Motion Pictures in Education: A Summary of the Literature. By *Edgar Dale, Fannie W. Dunn, Charles F. Hoban, Jr.,* and *Etta Schneider.* The H. W. Wilson Company, New York. 1937. Pages 472.

The key-word in visual education today is evaluation. It grew out of the need for authentic information as to the relative educational merits of the hundreds of films which are being distributed to schools. Teachers need guidance in selecting films, many of which they have never viewed. So standards have been set by committees of experts and films are being put to the test. The results are beginning to be made available. They will influence the use of films and their future production.

Keeping pace with the critical study of films, an evaluation of the writings about the educational cinema has been in process. The widely scattered literature in the field has been sifted, reviewed, and summarized. This was made possible by a grant from the American Council on Education and the Works Progress Administration. Summarizers Dale, Dunn, Hoban and Schneider combined efforts to produce a long-needed volume of source materials on: the administration of visual instruction, teaching with the motion picture and other visual aids, selecting instructional materials, film production in schools, experimental research in instructional films, and teacher preparation in visual education. Under these headings will be found summaries of the significant books, theses, pamphlets, and articles which have appeared in print within the last fifteen years. Editorial comments have been added to assist readers in determining the high spots of the available literature. Each summary is in the form of a digest which includes re-writing and verbatim quotations.

The entire report has been organized and the material interpreted in the light of the entire process of education. In doing this the authors made an effort to present a balanced picture of the field. Over several thousand titles were surveyed in arriving at the final summarization. The sections on the administration of visual aids and teacher preparation in visual instruction were issued in mimeographed form and distributed to workers in visual education throughout the United States for comment and criticism. The suggestions received from this experimental issue were incorporated in the rewriting of these sections for the present volume. While the other sections are not subjected to the same systematic evaluation, they represent the thorough-going manner in which the project was conceived and carried out.

The aim of the authors to promote the use of motion pictures in education rather than the promotion of the motion picture is represented in particular in Part II, which deals with techniques of teaching with motion picture and other visual aids. Teachers and administrators will find this latest contribution to the published studies in visual instruction to be of great value. It will be of particular significance to those who are conducting teacher-training courses in the field.—F. D. Mc.

* * *

Visualizing the Curriculum. By *Charles F. Hoban, Charles F. Hoban, Jr.,* and *Samuel B. Zisman.* The Cordon Company, New York. 1937. Pages 304.

Since Dorris's "Visual Instruction in the Public Schools" appeared in 1928 there has been no textbook published in the field of visual instruction during the intervening ten years. In this interim there have been many changes in the field, the

most important of which are the development of the sound motion picture, the standardization of 16 mm. equipment for school use, and the widespread use of pupil and hand-made slides. In addition there have been a number of important studies which have added materially to the scientific findings as to the value and use of visual aids in teaching.

The published reports of the Payne Fund Studies and of the experiments conducted by Rulon, Brunstetter, Arnspiger, Knowlton and Tilton, Westfall, and others, together with the steady growth of the use of visual aids of all kinds in schools, have made it essential that a new book reflecting the latest experiences in the field be published.

Visualizing the Curriculum, which appeared in the latter part of 1937, reflects the new points of view which have developed during the past decade. This new textbook contains nine chapters with the following titles: Why Visual Aids in Teaching, The School Journey, Objects and Models—The School Museum, The Motion Picture, Arresting Life With the Camera —The Still Picture, Graphic Materials, Integrating Materials of Instruction, Administering a Visual Aids Program, and Architectural Considerations.

Unlike many school textbooks of the past, which are relatively academic and uninteresting in style and format, *Visualizing the Curriculum* is attractively printed, illustrated, and is easy to read. It contains a multitude of suggestions on the best techniques in making effective classroom use of visual aids, and for this reason will be of greatest service in the hands of teachers. Quite properly the two chapters dealing with administration come at the end of the book, and not too great an emphasis is placed upon the summarization of research. The conclusions rather are woven into the body of the chapters dealing with the applicati of principles to classroom procedure Hoban, Hoban and Zisman have written book that should be in every professiona library for teachers in elementary an secondary schools.—F. D. Mc.

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Talking Pictures. By *Barrett C. Kie ling*. Johnson Publishing Company, Ne York. 1937. Pages 332.

The growth of the motion picture as direct instrument of instruction, and th influence which it wields on the youth o America, makes it increasingly importan that teachers and school administrator become familiar with the motion pictur industry as such, and the way in whic it operates. Too many books on the mo tion picture have been either too technic or Hollywoodian to be of value to teach ers. Kiesling, however, has succeeded i writing a readable yet thorough-going e position of the way in which motion pi tures are produced and what to look fo in evaluating the product.

There are in all twenty-eight chapter in his book, which is attractively and pro fusely illustrated. Some of the titles o these chapters will serve to illustrate th scope of the book: Motion Picture Appr ciation, Why Stories Are Changed, Th Scenario Writer, Motion Picture Researc The Sets Are Made, Costuming the Pi ture, Making Folks Over, "Going on Lo tion," Sound Recording, Editing the Fil Social Influences, In Home and Schoo The Film Abroad, and The Road Ahead.

Teachers could well afford to spend couple of hours with Kiesling's tr through movieland. In those universiti where courses on motion picture appre ation and production are offered th *Talking Pictures* will find a place as handbook.—F. D. Mc.